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Amber R. Stiles · Robert Fesnak

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Preface

When it comes to starting, building, and expanding a business, entrepreneurs and business owners will invariably come to an intersection between business, financing, intellectual property, and the law. These areas are diverse, but an understanding of each is absolutely critical to the successful development of a company. With years of experience as consultants to entrepreneurs and business owners, the authors of this book have recognized the guidance that is needed, and have sought to furnish a guide to issues that are important to the growth and expansion of a business. Specifically, this book identifies and explains various sources of funding that are available to companies at different stages in the life cycle of a company, explores strategies for extracting economic value for a company's intellectual property assets, and provides a primer on intellectual property rights.

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Chapter 1
Introduction

Creativity is one of the primary engines for creating economic value. This maxim holds as true for high-technology-related industries as it does for other industries. Such value may come from a new innovation, edging out competitors in the marketplace, creating a revenue stream where there was none, or enhancing market reputation. This book provides an introduction to intellectual property law as applied to the high-technology industries, but is also relevant to anyone seeking to start and grow a company. This area of law provides the legal framework for bridging creativity and the value that may come from it. Through the proper use of intellectual property law, one has a much better chance of transforming creativity into economic value.

Intellectual property law recognizes a creator's rights in ideas, innovations, and goodwill. Being intangible, intellectual property differs from real property (land) or personal property (physical possessions) that are secured, controlled, and protected using physical means such as fences, locks, alarms, and guards. Because intellectual property is a product of the mind and intellect, there is often no easy way to build a "fence" around it. Consider some of the most valuable trademarks in the world: Apple® and Microsoft®. These companies could not protect these marks with a physical fence. It is intellectual property law that provides a legal "fence" of trademark protection to protect the goodwill of the two trademarks.

Consider also the numerous novel products—software and hardware—that these technology giants regularly introduce to the market after investing significantly in research and development. Intellectual property, in the form of patents, plays a key role maximizing the companies' revenue from these investments:

- By protecting them from the market impact of knockoff products,
- By encouraging mutually beneficial cooperation with competitors through licensing deals, and
- In some cases, by providing a company with bargaining chips that can be used to avoid or mitigate the negative effects of litigation.

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There are many intellectual property pitfalls that await the unwary. Different rules apply to different types of intellectual property ("IP") and rights may be forfeited if appropriate measures are not taken to secure and protect them. It is important to understand the types of IP protection and the respective rules that govern each type of IP.

1. Patent: Patents may be granted for the invention of any new and useful process, machine, manufacture, or composition of matter or an improvement thereof. A patent is a property right that grants the inventor or owner the right to exclude others from making, using, selling, or offering to sell the invention as defined by the patent's claims in the USA for a limited period of time.
2. Trademark: A trademark is a word, phrase, symbol, or design, or combination of words, phrases, symbols, or designs which identifies and distinguishes the source of the goods or services of one party from those of others. Trademarks promote competition by giving products corporate identity and marketing leverage.
3. Copyright: Copyrights protect original works of authorship fixed in a tangible medium of expression. Copyrighted works include literary, dramatic and musical compositions, movies, pictures, paintings, sculptures, and computer programs. Copyright protects the expression of an idea, but not the idea itself.
4. Trade Secret: Generally, a trade secret is any formula, manufacturing process, method of business, technical know-how, etc., that gives its holder a competitive advantage and is not generally known. The legal definition of a trade secret and the protection afforded to a trade secret owner varies from state to state.

The table below highlights some of the attributes of and distinctions between these different types of IP:

	Patent	Trade secret	Trademark	Copyright
Underlying theory	Limited monopoly to encourage innovation in exchange for disclosure of invention to the public	Protects proprietary and sensitive business information against improper acquisition	Used to identify the source of a product or service to consumers, and to distinguish the source of products or services from other sources	Limited monopoly to encourage the authorship of works
Subject matter	Processes, machines, articles of manufacture, compositions of matter, asexually reproduced plants, designs	Formulas, patterns, compilations, programs, devices, methods, techniques, processes, etc., that derive independent	Trademarks, service marks, trade names, certification marks, collective marks, trade dress	Literary, musical, choreographic, dramatic, and artistic works *limited by* idea/expression dichotomy (no protection for

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	Patent	Trade secret	Trademark	Copyright
	for articles of manufacture. Laws of nature, mathematical algorithms, natural phenomena, mental steps, etc., are not patentable	economic value from being "secret"		ideas, systems, methods, procedures); no protection for facts/research
Legal source	Patent Act (35 USC § 100 et seq.)	State statutes (e.g., Uniform Trade Secrets Act); common law	Lanham Act (15 USC §§ 1051–1127); common law	Copyright Act (17 USC 101 et seq.); some limited common law
Legal standards	Must be patentable subject matter, novel, non-obvious, and useful.	Information must not be generally known or readily available. Reasonable efforts to maintain secrecy must be taken	Must be distinctive or carry a secondary meaning (for descriptive and geographic marks), and must be used in commerce	Must be an original work of authorship fixed in a tangible medium
Scope of rights	Exclusive right to prevent others from making, using, selling, or offering to sell the subject matter of the patent	Protection against improper acquisition by others	Exclusive right to use the mark within a particular territory depending on the type of trademark protection	Exclusive right to perform, display, reproduce, or make derivative works
Term	20 years from application filing date	No time limitation. Protection is available as long as it is kept secret	No time limitation. Protection is available as long as it is used in commerce	Generally, the term is the life of the author plus 70 years. For works of corporate authorship, the term is 120 years after creation or 95 years after publication, whichever endpoint is earlier

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	Patent	Trade secret	Trademark	Copyright
Enforcement/remedies	File suit for patent infringement. Remedy can be damages (lost profits or reasonable royalty) and injunctive relief	File suit for misappropriation, conversion, or breach of contract. Remedy is typically damages	File suit for trademark infringement. Remedies can include injunctive relief, accounting for profits, destruction of goods, etc.	File suit for infringement. Remedies include injunctive relief, destruction of infringing goods, and damages (actual or profits or statutory damages)

Patents, trademarks, trade secrets, and copyrights all have a strong presence in high-technology industries. Patents and trademarks are the most common means of IP protection in these industries.

As evidenced by the steady stream of novel high-tech offerings and the rate at which the latest gadgets become "obsolete," many startup and early stage companies secure millions in investment capital for research and development to meet the immense demand for new, useful technologies, and to help bring to market the next wave of cutting-edge products for consumers. The fruits of this research and development—which give rise to the technologies themselves or to a key component of a particular products' functionality—are typically protected through patents. The following table shows a sampling of some electrical technology classes of patents and how many have been issued by the United States Patent and Trademark Office ("USPTO").

As companies grow and become more successful, they begin to invest significant sums of money in advertising and marketing their brands in order to build up goodwill and consumer loyalty toward their products. These companies strive to reach the level of brand recognition as "supermarks"—i.e., company trademarks that have achieved a level of famousness to be considered a household name. Examples include AT&T®, Apple®, GE®, Google®, Intel®, Microsoft®, Samsung®, and Sony®. Marks such as these are among the world's most valuable and are instantly recognized by the general consuming public worldwide as a designation of source and associated with an expected level of quality. Startups such as Lyft®, Uber®, Spotify®, Airbnb®, SpaceX®, GitHub®, and Dropbox® have all developed strong brands that are highly recognizable marks in the USA.

Class	Class title	Pre-2005	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
320	Electricity: Battery or Capacitor Charging or Discharging	3850	208	183	186	246	503	623	558	802	731	769	1220
323	Electricity: Power Supply or Regulation Systems	4821	294	400	384	375	491	576	602	601	665	763	792
341	Coded Data Generation or Conversion	8837	653	817	806	886	750	806	762	648	767	751	738
380	Cryptography	3035	225	369	413	374	493	582	616	772	869	873	681
446	Amusement Devices: Toys	5770	174	154	137	128	122	182	195	169	189	227	217
700	Data Processing: Generic Control Systems or Specific Applications	15,282	1008	1318	976	905	862	1271	1369	1601	1907	2018	2047
704	Data Processing: Speech Signal Processing, Linguistics, Language Translation, and Audio Compression/Decompression	6419	427	858	776	810	782	970	1084	1340	1574	1500	1407
717	Data Processing: Software Development, Installation, and Management	3420	484	772	727	732	864	1319	1105	1517	2119	2193	2084

In short, it is very important for companies to secure patent (and, where appropriate, trade secret) rights in its research and development, and to invest in brand and reputation by filing for trademark protection. Once secured, a company can enforce its intellectual property rights against a competitor. Several notable examples are summarized below.

(1) In NTP, Inc. v. Research-In-Motion, Case No. 03-1615, 418 F.3d. 1282 (Fed. Cir. 2005), NTP Inc. (NTP), owner of several patents relating to the integration of electronic mail with radio frequency wireless communication networks, sued Research in Motion (RIM), which is the Canadian seller of BlackBerry®, in the United States alleging that elements of the BlackBerry® system infringe various method and system claims of NTP's patents. The Court of Appeals for the Federal Circuit ("CAFC") reversed the district court's finding of direct infringement under section 271(a) of an asserted method claim because at least one of the asserted patented method steps occurred in Canada. The CAFC, however, affirmed the district court's ruling of infringement of certain system claims notwithstanding the fact that a key component of the claimed system was located outside the United States.

(2) In Ebay Inc. v. Mercexchange LLC, 547 U.S. 388, 126 S.Ct. 1837 (2006), eBay the online auction site, practiced online auction technology for which MercExchange owned patents, including a patent which covers eBay's "Buy it Now" function. Initiating negotiations, eBay sought to outright purchase MercExchange's online auction patent portfolio in 2000, but then abandoned the negotiations. MercExchange sued eBay for patent infringement. The U.S. Supreme Court unanimously decided that an injunction should not automatically issue based on a finding of patent infringement. Furthermore, an injunction should not be denied purely on the basis that the plaintiff does not practice the patented invention. Rather, a federal court must weigh what the Court described as the four factors traditionally used to determine if an injunction should issue.

(3) In KSR Int'l Co. v. Teleflex, 550 U.S. 398 (2007), Teleflex, Inc. sued KSR International, claiming that a KSR product infringed Teleflex's patent on connecting an adjustable vehicle control pedal to an electronic throttle control. KSR argued that the claim was not patentable because the combination of the two elements was obvious. The district court ruled in favor of KSR, but the Court of Appeals for the Federal Circuit reversed. The Supreme Court unanimously reversed the judgment of the Federal Circuit, holding that the disputed claim of the patent was obvious under the requirements of 35 U.S.C. § 103 and that in "rejecting the District Court's rulings, the Court of Appeals analyzed the issue in a narrow, rigid manner inconsistent with § 103 and our precedents," referring to the Federal Circuit's application of the "teaching-suggestion-motivation" (TSM) test.

The above cases were filed in federal court to enforce federal IP rights. Another commonly used option is to file suit in the International Trade Commission (ITC) to prevent the importation of articles that infringe a valid and enforceable US patent, registered copyright, or trademark. For example, in 2009, a US company claimed that Research in Motion's BlackBerry devices, servers, and desktop software infringe a patent for an authentication system that can be used with services conducted over the Internet in a complaint to the ITC. In the Matter of Certain Authentication Systems, Including Software and Handheld Electronic Devices, Complaint No. 2699. Research in Motion is a Canadian company. Ultimately, after five months of negotiations, the parties reached a settlement agreement.

This book illustrates how IP rights can apply by presenting examples from real-world companies. Case studies are used throughout the book to demonstrate how IP rights, financing, management, and business all work together in the startup industry. The examples throughout the book will relate to well-known startup companies and well-established companies and products that many readers will be familiar with.

Part I of this book provides an overview of the various sources of funding that are available to a startup or developing company and the corresponding IP strategies for each stage of development in the life cycle of a business. Part II provides a comprehensive overview of the most common forms of IP rights. Part III provides guidelines for how technology companies can properly secure and implement their IP rights and discusses different monetization strategies, including but not limited to the enforcement, leveraging, and licensing of IP rights.

Examples and Illustrations Throughout This Book

Examples and illustrations will be used throughout this book. Some are real-world scenarios featuring well-known companies. Others are hypothetical scenarios. These are intended to enhance the reader's understanding of the subject matter contained in the following chapters.

Part I
Startup Funding Sources, Stages of the Life Cycle of a Business, and the Corresponding Intellectual Property Strategies for Each Stage

Chapter 2
Sources of Company Funding

Abstract An early-stage or startup business will transform and morph as it escalates through the different stages of growth, from a fledgling startup to a successful large company. The stages of development that a business goes through during its life cycle include startup and early-stage development, growth and expansion, and maturity. As the new company moves from the design and conceptualization stages, through product development and finally to commercialization, there are many stages of growth which all require financing in some capacity. Securing funding is important at every stage of a company's development. Funding can come from a variety of different sources, which are discussed in this chapter.

2.1 Seed Capital and Early-Stage Funding

Seed funding is early-stage funding that a startup uses to launch an idea. The difference between seed funding and early-stage funding is that seed funding is generally when the business is prerevenue and it may still be developing a working model of the product or technology. Early-stage funding normally represents when the business is close to having or already has some revenues but remains unprofitable. The purpose of seed funding is to fund more research than development and sustain the startup until further infusions of cash can be obtained, such as funds from venture capital (VC) investors or cash flows generated by the startup itself. Seed funding is typically used to cover the initial costs of starting the business and research and early development costs of a product.

Seed and early-stage funding can come from a number of different sources, which are identified and discussed in more detail in this chapter. Seed funding can be difficult to obtain since the startup may only be in the idea stage—the founders have an idea of what their startup will be and what it will do, but they need initial seed capital to begin converting that idea into a reality. The amount of uncertainty that surrounds a startup at the outset can be a deterrent for investors, so startups often rely upon their own investment capital, investments made by family members and friends, grants, and crowdfunding as the main sources of early funding.

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2.1.1 Personal Investment/Bootstrapping

One of the earliest sources of funding comes from personal investments made by entrepreneurs and company founders. This is sometimes also referred to as bootstrapping or self-financing. Making a personal investment in your burgeoning company demonstrates to potential investors your confidence and dedication to your business ventures. Investors are often more inclined to make an investment in a startup where the startup founders believe in their own cause so strongly that the founders themselves are willing to financially back their own business endeavor. This is called having "skin in the game."

There are a number of ways that company founders and entrepreneurs can personally back their own business venture.

- **Investments from savings**. Many entrepreneurs and company founders will use their personal savings as a source of initial seed capital for their startup endeavor. Serial entrepreneurs who have had prior business successes have the ability to provide significant seed funding.
- **Borrowing against real estate assets**. If you own a home or other real property, it may be possible for you to get a home equity loan based on the equity you have in your home.
- **Liquidating personal assets**. Company founders and entrepreneurs can always liquidate their own personal assets and use the funds as seed capital for their business venture.
- **Using personal assets as collateral for a loan**. If company founders have good credit, they can try to obtain a bank loan for seed capital by using personal assets as collateral.

2.1.2 Friends and Family Funding

Many startups and early-stage companies obtain seed funding through investments or loans made by family members and close friends. The amount of funding that can be obtained from these sources depends greatly on the financial resources available to your friends and family, and the confidence your friends and family have in you and the business concept. It can also be difficult to manage seed funding from these sources as entrepreneurs and company founders tend to treat friends and family differently than they would third-party investors (e.g., they do not already have a pre-existing personal relationship with when they accept the third-party investor's capital funding).

While there are many horror stories about investments and loans from family and friends, a lot of pitfalls can be avoided and many potential conflicts can be reduced or eliminated by handling the loan or investment in a professional way. For instance, many friend and family investors sometimes mistakenly believe that their

investment buys them a say in how the business is run. By treating loans and investments from friends and family the same way you would treat a loan or investment from a third party who is unfamiliar to you, you afford your friends and family investors the respect that they deserve and you can keep them from trying to manage the startup. This will provide both parties full disclosure as to the terms of the financing and mitigate the likelihood of future disagreements.

It could be helpful to have a third party educate and explain the terms of the investment. By having a third party act as an intermediary, the investment takes on a more serious and professional air. The terms of an equity investment can include common equity or preferred equity, accrued dividends, preferences, and other rights. Equity investments are discussed later in this chapter. Debt instruments tend to be more straightforward and include terms such as term of loan, interest rate, conversion features, and collateral. A third party can explain these terms, so the investors understand their rights and what they are getting for their money. Debt instruments are discussed later in this chapter. A proper financing agreement identifies exactly what friend and family investors can expect to get.

2.1.3 Private or Governmental Grant Funding Options

One source of early-stage funding that new businesses should consider is grants. Unlike loans, grant money does not have to be paid back in the future and thus is not dilutive to the current equity holders. Grants usually carry stipulations as to how the grant money can be spent over a specific time period. Grants can take many forms, and which type of grant is best for your particular company's needs is something that needs to be considered.

Eligibility for certain grants is quite strict, and applying for grants is time-consuming. For many early-stage companies, pursuing grants might not be worth the effort and would ultimately be a waste of time as the process is slow, tedious, and often fruitless. But for early-stage companies that are in eligible industries, such as technology startups, or startups that have targeted causes, the efforts associated with applying for a grant can be well worth it if the grant is awarded.

If you believe that pursuing grants is a good idea for your particular business, it is beneficial to have a plan for how to approach the grant application process. Early-stage companies should target a few grant options that seem like a good fit and are in alignment with the business objectives of the startup. Next, it is important to establish a relationship with the grant-sponsoring entity. A company can greatly benefit from a relationship with someone who works for, or is involved with, the grant funding entity. Ask around for advice, either from people who work for the entity sponsoring the grant or from people you may know who have successfully obtained a grant, for tips on the application process. Make sure that your application is complete, and hope for the best.

2.1.3.1 Federal/State/Regional/Local Government Grants

Government grants for early-stage companies are available at the federal, state, regional, and local levels. Government grants are usually awarded to early-stage companies that are involved in certain lines of business that further the goals of the government entity sponsoring the grant. For example, at the federal level, grants for small businesses are generally very rare, but in certain business sectors, such as high technology, medical research, or scientific research and development, federal grants are made available to small companies and startups with the right potential and business objectives. At the local government level, local governments may be inclined to award grants to companies if a company's business would bring tourism or additional jobs to the area or would further some aspect of the local government entity's public agenda. State and local economic development authorities are good possible sources for these types of grants.

Government-sponsored grants often carry a number of strict eligibility requirements. Many of these grants are reserved for non-commercial entities, such as nonprofit organizations or educational institutes that are focused on developing certain industries. However, other grants, particularly at the local or regional levels, may be available that are meant to further economic development in certain geographic areas.

Small Business Grants

Small Business Innovation Research Grants

The Small Business Innovation Research (SBIR) grant program is a federal program coordinated by the Small Business Administration that offers startups and small businesses grants in an effort to stimulate high-technology innovation. These grants are limited to startups and small businesses working on targeted causes, such as scientific research and development, since the grant is funded by federal research funds. The grants are meant to allow small businesses to engage in federally sponsored research and development of products and innovations that have the potential for commercialization. These grants are funded by taxpayer dollars through SBIR participating agencies, a few of which include:

- The National Science Foundation.
- The National Institute of Health.
- The National Aeronautics and Space Administration.
- The Environmental Protection Agency.
- The Department of Transportation.
- The Department of Homeland Security.
- The Department of Health and Human Services.
- The Department of Energy.
- The Department of Education.
- The Department of Defense.

- The National Oceanic and Atmospheric Administration.
- The National Institute of Standards and Technology.
- The Department of Agriculture.

Each of the SBIR participating agencies administers its own grant program. The SBIR program is a three-phase program where small businesses and startups conduct research and development of an innovation. Funding is broken down based on the three phases and the phases build on one another, i.e., you can only obtain Phase II funding if you have successfully completed Phase I.

- **Phase I**. The first phase of the program is dedicated to establishing whether the innovation has technical merit, whether it is feasible, and whether there is any commercial potential. Funds for Phase I are generally limited to no more than $150,000 for one year.
- **Phase II**. The second phase focuses on further research and development efforts that expand upon the results obtained during Phase I. Funds for Phase II are generally limited to no more than $1,000,000 for two years.
- **Phase III**. The third phase is where the startup or small business pursues commercialization objectives based on the results of the research and development efforts of the first two phases of the SBIR program. No funds are generally available for Phase III, although some specific grant awardees may be eligible for additional funding from other sources.

Not many SBIR grants are awarded each year, and competition for these grants is very high. For instance, in 2014 only three hundred SBIR grants were awarded. However, the average funding amount of these grants was more than $600,000.

Small Business Technology Transfer Grants

The Small Business Technology Transfer (STTR) program is another federal program coordinated by the Small Business Administration focused on providing funding for technology innovation. The STTR program also promotes technology transfer by requiring collaborative research and development efforts between research institutions and small businesses.

Several government agencies participate in the STTR program, including:

- The National Science Foundation.
- The National Institute of Health.
- The National Aeronautics and Space Administration.
- The Department of Health and Human Services.
- The Department of Energy.
- The Department of Defense.

Each STTR participating agency administers its own grant program. Similar to the SBIR program, the STTR program is a three-phase program where small businesses and startups formally partner with research institutions during the first two phases. Funding is broken down based on the three phases and the phases build

on one another, i.e., you can only obtain phase II funding if you have successfully completed Phase I.

Private and Foundation Grants

There are a number of privately funded grants that are made available by established businesses and other organizations. Private grants generally have specific qualification requirements and are usually awarded to startups or small businesses with targeted causes. By way of example, private grants exist for women owned startups, minority owned startups, startups operated by veterans, etc.

Finding private grants for startups and small businesses can take some effort, and identifying ones that your particular startup qualifies for can be time-consuming. However, the payout can be significant as grants are basically free money that has stipulations on how it can be spent.

There are also many grants that are funded by private foundations. Foundations look for grant applicants whose business activities are in alignment with the goals of a foundation or what the foundation stands for.

2.1.4 Crowdfunding

Crowdfunding is a relatively new way to raise early-stage capital by the collective efforts and cooperation of a network of many individuals or backers, which involves pooling money to help support the company's business plan. Crowdfunding is usually done through an online platform, which enables early-stage companies to engage investors from all over the world. Each individual invested amount is usually small, but the sum total of investments accrued on a crowdfunding platform provides large sums of funding. There are two main types of crowdfunding: rewards crowdfunding and regulation or securities crowdfunding.

With a reward crowdfunding model, early-stage companies generally reward their crowdfunding investors with an incentive for making a small investment in the company. This could include offering the company's product or services to crowdfunding investors for free or at a reduced rate in exchange for the investment that is made. Sometimes companies that engage in crowdfunding utilize a tiered incentive system to encourage investors. Different levels of rewards are offered based on the amount of the investment that is made.

Example If a startup company specializes in providing matchmaking services through a subscription-based smartphone app, the startup might offer the following incentives for crowdfunding investors:

(1) A three (3)-month subscription of the services for free to crowdfunding investors who invest one thousand dollars ($1000),
(2) A six (6)-month subscription of the services for free to crowdfunding investors who invest two thousand dollars ($2000), and
(3) A twelve (12)-month subscription of the services for free to crowdfunding investors who invest three thousand dollars ($3000).

Regulation, or securities crowdfunding, is where the company sells securities in the company in exchange for capital from investors. Because investors are getting securities in the company in exchange for their investment, there are many regulations imposed by the Securities and Exchange Commission (SEC) on this type of crowdfunding.

New SEC rules[1] governing regulation crowdfunding activities came into effect on May 16, 2016, that enabled unaccredited investors, i.e., "typical" people without large amounts of wealth, to invest in ways that had only previously been available to accredited investors, such as those on Wall Street. Under the new regulations, anyone can invest up to $2000 (two thousand) dollars in startups using SEC-registered online crowdfunding platforms. For investments over $2000 (two thousand dollars), investment caps, or limits, are put in place based on the annual income or net worth of the investor.

The new SEC rules also place limitations on how much money an early-stage company can raise through regulation crowdfunding. Specifically, a company can raise no more than $1 million dollars totally through regulation crowdfunding efforts per year.

There are also stringent rules regarding how the company can advertise the regulation crowdfunding and what the company must disclose. Limitations have been placed on the company to only raise funds via a single platform. There are also strict compliance rules that must be followed by the company or else the company can face penalties. Another downside to crowdfunding is the fact that the entrepreneur will need to manage many more equity holders, which can have its own challenges.

Crowdfunding can be beneficial to early-stage companies in a number of ways:

- Crowdfunding generates a strong support network for the startup and raises awareness about the goods or services being offered by the company.
- Crowdfunding investors are often potential customers; so successful crowdfunding can produce lifelong customers.
- Crowdfunding can be an opportunity to get the company's business idea or product out to the market, where people could talk about it and generate buzz. In essence, crowdfunding can be a marketing opportunity as well as an opportunity to raise early-stage capital.

[1] 15 USC 77d(a)(6).

Companies that use crowdfunding as a way to raise early-stage capital should start about six months before the money is actually needed by the company.

2.1.4.1 Case Study: Kickstarter

One of the most well-known rewards-based crowdfunding platforms on the Internet is Kickstarter. Kickstarter brings millions of potential backers into contact with thousands of creative projects and startups in an effort to secure funding for these projects through a pledging system. Projects are made available for pledges for a set amount of time referred to as a campaign. Kickstarter is an all-or-nothing crowdfunding platform: If too few pledges are made and the startup does not reach its funding goal in the limited amount of time provided for the Kickstarter campaign, the startup loses all the funds that had been raised with Kickstarter. If the funding goal is not reached, investors get their investments returned to them and the startup walks away with nothing. Through Kickstarter, only projects that gather enough support and interest from investors and reach their funding goal are actually funded.

The idea behind Kickstarter is that backers and creators work together hand in hand. The creative party could not make the project a success without funding, and the backers are the ones providing the necessary capital to make the project a reality. Kickstarter is an apt name for the crowdfunding platform to say the least.

Kickstarter, and other crowdfunding platforms, can be a good way for a startup to gauge the public's reception of the startup's product or business. When a project is posted to Kickstarter, backers need to be lured into making a pledge for the project. If no one is interested in the project, the startup needs to take this information into consideration when deciding to move forward with the product, project, or business. It needs to be determined whether the lack of interest was in the communication of the project or the project itself. As such, Kickstarter can be a good way to test out whether the startup's marketing strategy is a good one for a particular product.

If no one is willing to back the product or project on Kickstarter, the failed campaign could be a lean way for the startup to validate whether further investment of time, money, and energy on a particular project is a good idea.

When a company uses a Kickstarter campaign, they post a video of their product or project on their company's Kickstarter page. This is effectively the company's "elevator pitch" (i.e., a short description of the product or service) for their project, and it is the main vehicle by which companies can entice backers into supporting their project. Once the campaign is up and running, companies should go out and market their Kickstarter campaign as aggressively as possible, in an effort to drive Internet traffic to the company's Kickstarter page. Page views result in potential backers watching the company's video. Video views result in backers making pledges. Pledges result in achieving the company's crowdfunding goals.

2.1.4.2 Case Study: Crowdfunder

Crowdfunder is the most well-known equity crowdfunding Internet platform in the USA. Crowdfunder puts startups and small businesses into contact with investors to raise early-stage funds for growing and expanding the startup. Startups and small companies can raise capital through one of, or a combination of, debt, equity, revenue sharing arrangements, and convertible notes. The terms that a company offers investors through an equity crowdfunding platform, like Crowdfunder, largely depend on the startup. For some companies, a debt offering to investors makes more sense. For other companies, an equity offering is the most logical choice.

Similar to other crowdfunding platforms, companies create a pitch that they post to their startup's Crowdfunder page. Companies must also provide a term sheet, investor pitch deck, and an executive summary for potential investors to review. The Crowdfunder campaign lasts for a predetermined period of time during which the company must raise enough funds to meet its funding goal. The deals that are made between investors and the company must comply with the SEC regulations governing equity crowdfunding.

2.2 Equity Funding

Raising capital is one of the biggest struggles a startup or early-stage company can face. Equity funding is the most common source of funding for early-stage companies. Equity funding, or equity financing, is the exchange of partial ownership of the company for an amount of funding. While equity funding offers advantages over debt funding (to be discussed later in this chapter), such as eliminating or reducing the risk associated with cash flow problems for debt interest payments, equity funding requires the dilution of ownership of the company for the company's founders. When limited cash flows are anticipated, or are a concern for a startup, serious consideration should be given to the advantages and disadvantages associated with using equity funding to grow a startup.

Due to the risky nature of lending money to a startup or small company, banks will typically hold off on providing financing to a small business venture until it has successfully entered the growth phase of its development. In the interim, smaller businesses and startup companies need alternative financing sources. Equity financing is a good, and may be the only, option for raising early-stage capital. Venture capitalists, angel investors, and private equity partners are important sources of financing for small ventures. These types of financiers are often individuals, but can also be institutional investors that are interested in investing in small entities that have great potential for growth. These investors, as part of their financing negotiations, often bargain for a stake in the company's success by providing the company with up-front capital in exchange for an ownership interest in the company, i.e., common or preferred stocks issued to the financier. Business incubators and business accelerators can be sources of equity financing as well.

One of the benefits of equity financing is that the business raises funds without incurring debt and the business is under no obligation to repay specific sums to the investors at specific intervals of time. One of the main disadvantages to this type of financing is that it dilutes the equity of the company.

Since the valuation of early-stage companies can be difficult to determine, investors will many times require financing using convertible debentures. A convertible debenture is a debt financial instrument whereby the investor converts the debt to equity based on a discount to the company value at the next round financing. This eliminates the need to have the entrepreneur and the investor group to agree on the company value at the timing of the financing.

2.2.1 Angel Investors

There are some affluent individuals, often referred to as angel investors, who are interested in investing privately in small businesses or startups during the early stage and growth and expansion stage of the company's growth—the stages of a business' development which are least certain and have the highest risk. Because the risk is so high, angel investors often require a return on their investment at a higher rate than venture capitalists (which are discussed in the next section of this book). It is common for angels to invest in industries that they have past experience in and will generally invest in businesses that are local to the angel since the angel often relies on his or her established network of professional service providers, such as accountants/tax specialists, legal counsel, and lenders, when assisting the investment venture's growth.

Angel investors provide funding to companies in exchange for convertible debt or ownership equity and contribute anywhere from $100,000 to $500,000 in private equity funds. Angels prefer businesses with a working prototype of the product, although some are persuaded to invest based on a proof of concept. Angels often look for at least the beginning steps toward IP protection of the product, such as pending or provisional patent applications, when deciding to make an investment.

2.2.2 Venture Capital

Venture capital (VC) is a form of funding for new business venture that is often conditional—meaning the funds usually come with strings attached. A few examples include instances where VC funds are granted in exchange for an interest stake in the company (i.e., equity), a seat on the board of directors, the right to approve loans on behalf of the business, authority over the hiring/firing process, or various promises that the VC will be included in all major business decisions. VC funds are typically derived from a pool of professionally managed funds contributed by either individual venture capitalists or institutional investors. When VC

funds are administered to a business, they typical range between $500,000 and $10 million.

Venture capitalists often have certain criteria that must be met or demonstrated by the business venture before the VCs will consider it a viable and worthwhile investment. For instance, VCs are typically looking to invest in companies with (i) potentially large and lucrative markets, (ii) strong management/advisor team, and (iii) a business model they feel can be executed. This will meet the VCs' primary interest, which is to ultimately obtain a high return on its investment.

VC funding is often limited to established technologies that are beyond the proof of concept stage; VCs are more inclined to invest in entities that are at the product development stage or at the production and marketing stages of commercialization since the technology is well developed by that point. Also, there are many VCs that prefer to invest only in companies that have an IP portfolio.

2.2.3 Rounds of Venture Capital Financing—Series A, Series B, Series C, etc.

Equity funding can be obtained as a series of funding, and each round in the series is given a corresponding letter based on how many rounds of funding the company has participated in Series A, Series B, Series C, etc. Professional investors often choose to participate in Series funding rounds since the company has gained some traction in the market and is a lower investment risk. Investors get shares of the company, or stock, in exchange for their lump sum investment capital.

At the outset of each round of funding, the company undergoes a valuation, i.e., a current assessment of how much the company is worth. Valuations are based on a number of factors, including market size, the company's risk profile at a particular stage of development, and the company's track record for success up to the time of the valuation. From this valuation, investors for Series A, for example, can determine how much funding to offer the company in exchange for a certain amount of equity in the company.

- Series A funding is generally used to finalize the product or service offered by the company and to optimize the target consumer base through initial marketing strategies.
- Series B funding is generally used for building the company, growing the workforce, and expanding their market share.
- Series C funding is generally used to scale up the business, which could involve acquiring other companies or intellectual property rights from competitors, expanding product lines, or broadening the customer base or market (e.g., entering into international markets).
- Series A, Series B, Series C, etc., designations often correspond to stock issuances.

In a typical round of equity financing, the premoney valuation is negotiated between the company and the new investors. Premoney represents the company's equity value prior to the new funding. Post-money valuation is the company's equity value after the new funding. The premoney value plus the new funding that will stay in the company for growth determines the post-money value. The new funding versus the post-money value will drive the amount of dilution to the existing shareholders.

Most larger rounds of equity financing will be funded in tranches, which are smaller pieces or slices of the total round of equity financing divided up over a period of time, rather than paid out as an up-front lump sum. Evergreen investment funds are an example of VC funds that are funded in tranches. Capital influxes are made into a company as incremental funding during a company's growth and expansion development stage. The evergreen funding arrangement is beneficial to both the company and the investor. The company gets small, manageable infusions of capital over time, as opposed to a large lump sum up-front. This arrangement ensures that the company is consistently fueled by a source of capital and eliminates the risk that the company could waste its funds simply by having too much money at the start. Investors similarly benefit from evergreen funding structures by holding onto their investment capital and providing only small dispersion to the company at a time. This way, the investor is in control of the funds, rather than the company. If the company fails, the investor has not lost all of their investment capital since they retained control of the money in the first place.

Example JumpStart is an Ohio-based regional economic development organization that manages an evergreen fund for startups and small businesses. JumpStart chooses to work with and fund startups in the information technology, healthcare business and consumer products and clean technology areas. JumpStart offers evergreen funding in two forms: equity-based capital and debt-based capital.

2.2.4 *Business Incubators and Accelerators as a Source of Equity Financing*

Business incubators are designed to nurture small, fledgling businesses during the startup and early development stage by providing business development support, some initial financing, and encouraging the business to flourish and grow at its own pace. Participation in the incubator is permitted in exchange for an equity stake in the company.

Incubators and accelerators share similar characteristics, such as offering business development services and professional advice and guidance to startup

participants in exchange for an equity stake in the company. Also, businesses that participate in an accelerator, like an incubator, have a myriad of opportunities to network with others in the field. The major difference between incubators and accelerators is time and the amount of pressure that the company is put under. Business accelerators are intense, time-compressed programs designed to assist companies in getting up and running in a matter of months.

2.3 Debt Funding

Debt funding can be used by businesses that are in the early stage, the growth and expansion stage, or the mature stage of the business life cycle. Debt funding, or debt financing, is a more attractive means of financing for larger business entities that are more established, such as companies in the growth and expansion stage, or the mature stage, than for startups. But some startups find debt financing to be useful, and possible, at the early stage of development as well.

In debt financing, money is borrowed with the intent that it is to be repaid over a fixed period of time, with interest. Interest paid on the loan is tax deductible for the borrower. Debt financing may further be distinguished as short-term and long-term debt financing.

- Short-term financing will be repaid in full within one year of borrowing.
- Long-term financing will be repaid in full more than one year after borrowing.

Debt financing is essentially a loan whereby the lender retains no ownership interest in the business in exchange for the loan. The lender earns interest on the amount borrowed. It is common for the lender to require a personal guarantee based on the business owner's assets and credit history as an individual when making the loan in order to protect the lender's investment.

2.3.1 Loans

When the founders of the company have good credit and own real estate or other valuable assets, it may be possible to obtain financing for the company through private loans made to the founder personally. However, mixing the debts of the company with the personal finances of any individual founder is often an unappealing financing option because if things do not work out with the company, the individual founder is stuck dealing with the consequences and the loan.

Some banks will permit the use of IP as collateral when obtaining a loan or for establishing a line of credit for a business. IP-backed lending is a fairly straightforward debt instrument, and in fact, the use of IP as collateral may allow the business to get better financing rates. IP-backed loans can be personal, i.e., made

out to an individual, such as a founder of a company, or can be business loans, which are made to the business as an entity. As a borrower, it is important to establish title to the collateral IP as a preliminary matter. No lender is comfortable making a loan in reliance on collateral when it is uncertain who exactly owns the rights to the IP being used as collateral, even if the borrower purports to own the rights. It is highly recommended that a filing be made with the USPTO regarding any collateral assignments of patents or trademarks.

After ownership is confirmed, a lender will be concerned with "perfection" of the security interests in the IP. Perfection is a notification process whereby the secured parties' rights become fully enforceable. Two sets of laws govern perfection of IP collateralization: federal law and Article 9 of the Uniform Commercial Code. Based on the type of IP used as collateral, perfection may require compliance with one or both. To perfect the security interests in patents and trademarks, compliance with the filing requirements of Article 9 is required. Perfection of copyright interests, on the other hand, may only require federal registration with the Copyrights Office. However, if the securities interest in the copyright also grants an interest in related receivables derived from the copyright, then compliance with Article 9 is also required.

2.3.1.1 Small Business Loans

Small businesses have a lot of options when it comes to small business loans. Some options are better than others, and which small business loans a business entity can take advantage of depends on the specific circumstances of the business.

Some banks offer special small business loans. However, banks are often hesitant and reluctant to issue these loans to unestablished startups and instead prefer to lend to businesses with a proven financial track record and proven success in the marketplace, such as companies that are in the growth and expansion stage, or the mature stage of development. Obtaining a small business loan is something that a startup or small growing business should consider once it has become more established.

When a small business has difficulty obtaining a traditional bank loan, other loan options may still be available, for instance through the Small Business Administration (SBA). The SBA is a government entity that works with small businesses and startups to obtain access to financing through a number of different government programs. The SBA does not make direct loans to startups or small businesses, but rather places eligible business entities into contact with third-party lenders. When a startup or small business is eligible for a loan through one of the SBA loan programs, the SBA will guarantee the loan will be repaid, which alleviates some of the risk that lenders would shoulder by granting a loan to a small business or startup. There are several SBA loan programs that startups can apply for:

(1) **Basic 7(a) Loan Program**. The 7(a) loan program is available to eligible borrowers who are beginning, acquiring, or expanding their small business or startup. Funds obtained through this loan program can be used for real estate purchases, equipment purchases, and working capital. It is the most popular SBA loan program, and the program must be applied for through a lender institution that is a participant in the SBA Basic 7(a) Loan Program.
(2) **Certified Development Company 504 Loan Program**. The Certified Development Company 504 Loan Program is available for small businesses that are experiencing growth. The loan is a long-term, fixed-rate loan that can be used for major fixed asset purchases for the business, such as buildings, land, or equipment.
(3) **Microloan Program.** The Microloan Program is true to its name. Small loans are granted to eligible borrowers who are trying to establish or grow a brand new startup or small business. The loan amounts offered under this program are less than $50,000. Funds obtained through this loan program can be used for real estate purchases, equipment purchases, and working capital.

The SBA also offers a number of additional loans, but these loans carry specific eligibility requirements or use requirements. Some examples include disaster loans, export assistance loans, veteran and military community loans, and special-purpose loans.

Obtaining SBA loans can be challenging as the eligibility requirements are very specific and are strictly adhered to, meaning there is no flexibility in the lending application process. Additionally, since SBA loans are obtained through a government program, processing of the loan application and then obtaining the loan itself can take considerably more time to accomplish than a startup can reasonably afford. While SBA loan programs are an option that is available to early-stage companies, these programs may not be the best option for the company to pursue.

Microloans may also be available through nonprofit lending organizations, for which startups can apply. Specific terms generally apply to these types of loans, such that borrowers must immediately begin repayment or that the borrower must have positive cash flows above a certain amount in order to qualify.

2.3.1.2 Peer-to-Peer Loans

Startups and small businesses that are growing can also take advantage of peer-to-peer (P2P) lending. A P2P loan is made available through an online platform where people can make loans to other people or entities. In P2P lending, borrowers are held personally liable for the debt, and P2P loans carry high interest rates. However, when a startup is having difficulties obtaining financing, a P2P loan may be another good alternative. Prospective borrowers need to have good credit in order to seek P2P financing.

2.3.2 *Lines of Credit*

2.3.2.1 Use of Credit Cards

Startups and other businesses also have the option of obtaining lines of credit by having a credit card issued to the business, although banks are more likely to grant credit cards to more established businesses than to startups. When a business has a business credit card, the business can begin to develop its own credit rating. However, the owner of the card must back the credit cards, meaning they are liable for the debts accrued on those company cards.

Startups and small businesses should carefully consider their options and review the terms and conditions for which credit card company they are planning on securing a line of credit. State laws may require a guarantee on the line of credit by those individuals who have significant ownership of the startup. Many credit card companies offer special business credit cards, with special terms and conditions and reward programs. Startups and small businesses that are considering obtaining a separate credit card for business expenses need to consider:

- Maximum limits on the card.
- Fees associated with the card.
- Interest rate on borrowing, which can be rather high.

2.3.2.2 Asset-Based Lines of Credit

Another creative IP-based financing solution is an asset-based line of credit. These lines of credit are designed to provide a company with the capital necessary to bridge the gap between cash flows from receivables and its business expenses. The line of credit offers a 0 % interest rate for a set period of time after the line of credit is established (for instance, balances carried on the line of credit have a 0 % interest rate for the first six months or year that you have the credit line) and can be used for an assortment of business expenses from operating costs to working capital used to promote company growth, or as capital for turnarounds, buyouts, mergers, or acquisitions. Where traditional lines of credit are based primarily on the credit-worthiness of the borrower, asset-based lines of credit are based on the value of certain assets, such as accounts receivables, inventory, and IP assets. Typically, only IP assets with demonstrated market value are factored into the credit assessment of the assets. These could be IP assets that have previously been bought and sold, or those IP assets with licensing agreements in place, which are known to generate revenue.

2.3.3 Securitization with Intellectual Property

IP-backed securitization is quickly becoming a popular means of debt financing. For instance, an IP-holder's future cash flows, or royalty payments, from future IP licensing agreements can be exchanged for an up-front, lump sum payment by an investor. Essentially, the IP-holder receives cash in hand and trades its right to royalty payments on future licensing deals, or a portion of the royalty payments, which may result from its IP for a set number of years. Securitization in this fashion puts the risk on the investor because the investor pays out a set amount to the IP-holder, which it may or may not recover as a result of future licensing deals.

Securitization can be a mutually beneficial form of debt financing for both the investor and the IP-holder. There are two main models for securitization of future royalties: royalty interest transactions and the revenue interest model.

In a royalty interest transaction, the transaction gives the IP-holder an up-front payment for its IP rights, while the investor attempts to buy the future revenue stream from the IP at a discounted rate, with the hope that the IP turns out to be worth more than its purchase price over the duration of royalty payments. The discount rate is dependent on the required return the investor is seeking based on the perceived risks of the investment. The riskier the investment, the higher the discount rate and the lower the value of the future royalty payments. If the investor is correct, the purchase could be well worth the risk.

A revenue interest model is similarly structured but is executed before the IP rights have generated any revenue whatsoever. Due to the lack of established earning potential of the IP rights and the greater level of risk associated with the IP, the investor can typically negotiate a lower value and more investor-friendly terms for the transaction. The investor is effectively paying for the future benefits of all prospective royalty generation from the IP rights prior to any history of actual royalty payments.

2.3.3.1 Case Study: Debt Financing with Bowie Bonds

In 1997, Bowie bonds, named after rock musician, actor, and record producer David Bowie, were asset-backed securities based on current and future royalty revenues that would be generated on songs recorded by Bowie prior to 1990. By that time, Bowie had amassed 25 albums, consisting of 287 songs, which he collateralized in a unique and pioneering securitization scheme. David Bowie was the first musician ever to securitize his IP rights in his music as collateral for a loan.

The David Bowie Class A Royalty-Backed Notes were given an A3 rating by Moody's Investors Services, based on a 7.9 % annual return, which at the time was a better rate of return than US Treasury bonds. The Prudential Insurance Co. was eager to buy the bonds and purchase the entire bond issue. Bowie had to forfeit his

rights to all royalties for a 10-year period in exchange for an up-front lump sum payment of $55 million. This transaction took the form of a loan. Over the 10-year period, the bondholder would get an annual principal payment plus interest. In the event that the contractually stipulated debt obligation was not satisfied by the royalties generated over the life of the bonds, Bowie would sacrifice his IP rights in his music to the bondholder. Prudential held on to the bonds and did not make them available for repurchase by individual investors on the secondary market.

Bowie bonds met the market with such initial success that other artists also opted to securitize their IP rights in their musical creations. The individual responsible for structuring the Bowie bond debt vehicle was a banker named David Pullman. Pullman assisted other artists securitizing their music with debt structures called Pullman bonds, which were similar to the Bowie bonds. Some notable artists include James Brown, the Isley Brothers, Ashford & Simpson, heavy-metal band Iron Maiden, Marvin Gaye, and Rod Stewart.

Bowie bonds were downgraded to Baa3—near-junk status—in 2004, citing lower-than-expected revenues due to a slowdown in sales of recorded music. Illegal downloading was largely to blame for the slowdown, as file-sharing was rampant in the early 2000s. Apple helped to legitimize the downloadable music and media content industry with the popularization of Apple's iTunes and iPod products. Instead of having to buy an entire record just to own and listen to one or two songs, consumers could instead purchase the rights to individual songs. This change in the way people purchase music generated a revival of the music industry.

2.3.4 Collateralization of IP

Intellectual property assets represent important, valuable business assets that can be used as a source of debt capital. Many traditional lenders are uncomfortable lending capital to unstable borrowers or borrowers without any credit history, such as new startup companies and small businesses, without some sort of collateral to support the loan.

IP-based collateralization allows an IP rights holder to derive value from their intangible assets by securing financing that would otherwise be unavailable to them. In certain circumstances, a lender will provide a loan to the IP rights holder in exchange for a security right in the IP. In the event that the loan is defaulted on, the lender will assume the rights to the collateral IP.

The collateralization process is relatively simple to understand, but challenging to execute because the IP assets must be valued prior to lending. Intangible asset valuation for the purposes of collateralization is often a difficult undertaking for an IP appraiser because not only it requires an accurate determination of the fair market value of the IP and an accurate forecast of future revenues that could be generated by the IP being valued in the current context, but also it requires a

prediction as to the theoretical future liquidation value of the IP in the event that the loan is defaulted on. Where normally IP assets are typically appraised at fair market value, which is the value that two willing parties would negotiate in an arms-length transaction to purchase the rights, those IP assets that have been seized in the event of default will be liquidated by the lender under distressed circumstances and will likely be worth less than fair market value.

The future liquidation value is challenging to determine since it is unclear what the worth of the IP will be at the time of default. If, for instance, the company's default on the loan is a result of the technology being a failure, the liquidation value of the collateral IP assets will be worth less than the liquidation value of the IP assets seized if the default is a result of poor company management. The challenge for the business is being able to support the value of the IP through sales of similar IP or historical data and to show that the IP is appropriately protected.

There are many benefits to using IP assets as collateral for a loan. Loans provide a source of capital that does not dilute the company's equity structure. Risk management is another benefit to IP collateralization. In non-recourse financing, the lender is only entitled to repayment from the profits resulting from the investment loan; the lender may not collect repayment from any other assets owned by the borrower. The risk associated with licensing royalty payments is transferred to the collateral holder because royalties generated from the collateral IP are paid to the lender for the duration of the loan, until repayment is completed. If a licensee fails to pay its due royalties on collateralized IP, the lender has a cause of action to pursue the licensee for failure to pay, instead of the borrower/IP rights owner. It is important to note that this is an incredibly rare situation, as most lenders require personal guarantees from the loan recipient.

2.3.4.1 Case Study: Levi Strauss Borrows Against Trademarks and Other Assets

When an established company has valuable intangible assets, the company can leverage that value to generate sources of capital. The Levi Strauss Company and a number of its subsidiaries and sister businesses have a highly valuable IP portfolio. The company holds intellectual property in the form of patents, design patents, trademarks, copyrights, and trade dress. The company also has other valuable intangible assets such as a strong brand and goodwill.

In the early 2000s, Levi Strauss sought to use some of its IP as collateral for a few significant loans. Bank of America, and its various subsidiaries, underwrote a $350 million dollar loan to Levi Strauss collateralized by Levi's trademarks, copyrights, and other IP rights. In exchange for the loan amount, Bank of America was granted an interest in all of the following intangible assets belonging to Levi Strauss under trademark:

- Trademarks
- Service marks

- Designs
- Logos
- Indicia
- Trade dress
- Company name
- Corporate name
- Business names
- Trade style

Bank of America was also granted an interest in all of the following intangible assets belonging to Levi Strauss under copyright:

- Copyrights
- Software
- Designs
- Computer programs
- Computer databases
- Layouts
- Drawings
- Writings
- Formulas

Bank of America's ownership interest in Levi's IP terminated upon the repayment of the loan in full.

2.3.4.2 Case Study: Ford Leverages Trademarks and Patents for Loan

In 2006, Ford Motor Company was struggling and in desperate need of capital to finance a restructuring of the company and had some near-term and medium-term negative operations-related cash flow issues to address. A deal was arranged between Ford and Citigroup, J.P. Morgan Chase, and Goldman Sachs to finance the loan. Ford set out to secure the money it needed, a whopping $18 billion dollars, by mortgaging a number of its business assets. Assets that were pledged as collateral for the loan included equipment, factories, buildings, along with stakes in some of Ford's subsidiaries, and intellectual property assets, including patents and trademarks.

The iconic blue oval with the Ford logo inside was just one example of the intellectual property that was pledged a collateral by Ford for capital in the loan arrangement. Ford eventually earned its marks back in 2012, when Moody's, which is one of the principal rating agencies on Wall Street, upgraded the outstanding debt Ford was holding to investment grade. The upgrade of Ford's debt satisfied the terms of the 2006 loan, which released Ford's trademarks back under Ford's control.

2.4 Mezzanine Financing

As a company becomes more established, additional forms of financing become available. For instance, companies that are in the late growth and expansion stage, and mature stage of development, may be eligible for mezzanine financing. Mezzanine capital is designed to bridge the gap between debt financing and equity financing. Mezzanine financing is a form of either debt with warrants or convertible debt, which begins as a loan and later converts to equity if the loan is not repaid or a certain return on investment has not been achieved, reducing the risk for all parties involved. Mezzanine capital is usually large sums, used to facilitate big changes or growth in the company. Not all companies use mezzanine financing, but it is important to know that mezzanine financing options exist and a company can use this type of financing to its benefit.

Mezzanine financing is another form of financing that is a combination of debt and equity financing. To think of this in another way, mezzanine financing is a form of convertible debt. The investment starts as a loan, which can later be converted into equity. Debt financing and equity financing are not mutually exclusive and are combined to allay some of the disadvantages of each. Ideally, the blend of debt to equity financing should maximize return on investment while minimizing risk. Typically, a company seeking mezzanine financing should have stable cash flow to pay the interest on the debt and show significant growth, so the warrants or equity increases in value.

A mezzanine loan can be either a secured debt requiring collateral, or an unsecured debt, meaning the investor does not require collateral in exchange for the loan. For the secured debt scenario, some mezzanine investors will permit the use of IP rights as collateral. In situations where the debt is unsecured, the investor holds a convertible note, which can be converted to equity in the company if the loan is not repaid. The result of a conversion is dilution of the ownership structure of the company, giving a stake in the company to former creditors. However, mezzanine financiers are not particularly interested in becoming shareholders in the company—they would prefer to be repaid on the loan. The convertible note is a fallback measure in the event that the loan is not repaid.

A benefit of mezzanine financing for late growth and expansion stage and mature stage companies is that if the mezzanine debt is unsecured and can be subordinated to senior bank debt, then the mezzanine debt can be leveraged to attain lower cost capital such as senior bank debt.

The terms of mezzanine financing are defined by an agreement, which include terms such as the type of instrument, the date of maturity, the interest rate on the mezzanine loan and any fees associated with the financing, ranking in the capital structure, and the rights of the parties in the event of a default.

One of the biggest benefits of obtaining mezzanine financing is that once mezzanine financing is secured, established and mature companies often find that other financing providers are more willing to also make investments in the company, since a mezzanine financier has backed the company.

Companies use mezzanine capital in a number of different ways, but one common theme is clear: Mezzanine capital is often used for funding a growth opportunity. Typical growth opportunities financed by mezzanine capital include the following:

- Real estate transactions for factory facilities or store fronts,
- Plant or factory expansion,
- Launching a new product line,
- Restructuring,
- Establishing a new distribution channel, or
- Facilitating a leveraged buyout or acquisition.

When financing a company, there are many layers of financing, and a hierarchy is created among the company's financiers. Debt holders have superior claims to equity holders (i.e., shareholders), and mezzanine financiers' claim to the company's assets fall somewhere in the middle of the hierarchy.

The structure of mezzanine financing often takes one of the two forms, subordinate notes with or without warrants or preferred stock. Both offer mezzanine investors a claim to the company's assets, but these claims are subordinate to the claims of senior debt holders, but are superior to the claims of common stockholders. Mezzanine investors often prefer one form of mezzanine capital structuring to the other.

2.4.1 Subordinate Notes

Mezzanine financing is often structured as a subordinate note, which is a loan note that is subordinate to other, senior debts held by the company. Senior debt holders (i.e., banks and other debt financiers) hold debt notes that are superior to mezzanine subordinate notes, and senior debt holders should be compensated fully before a mezzanine subordinate note holder is compensated. The note is subordinate because it is usually unsecured, but often carries a higher interest rate to reflect the increased level of risk associated with its unsecured status.

2.4.2 Preferred Stock

Mezzanine financing can also be structured as preferred shares of stock. Preferred stock is senior to common stock, but junior to debt holders' claims. Preferred stock holders are afforded special privileges, called preferences, when it comes to their shares of equity in the company. Preferences can include accrued dividends, anti-dilution rights, and drag-along and tag-along rights. For instance, preferred shareholders hold a claim that is superior to common stockholders and can be

granted an equity warrant, which is a conversion rate by which their preferred shares can be converted into common shares of stock at a set price within a set time period.

2.5 Anticipated Rate of Return for Investors

Typically, when investors agree to make an investment in a company, the investors expect a rate of return on their investment capital, or a return on investment (ROI). The below chart is a general guideline as to the expected rate of return organized by the type of investor. These rates are current rates as of the completion of this book, but these rates may fluctuate over time. As a reference point, the current bank rate as of the completion of this book was 0.5 %.

Source of funding	Investor required rate of return (%)
Bank loans	3.5–5.5
Asset-based loans	4–10
Mezzanine financing	8–16
Private equity	25–30
Venture capital	25–45
Angel funding	30–35

Chapter 3
Early-Stage Strategy

Abstract From the moment of inception of a great idea, there is an inclination to protect and nurture that idea, striving to turn it into a commercial success. At the start of an entrepreneurial adventure, IP rights are procured on the idea and a business is formed. As the idea moves from ideation into the earliest stage of development, companies need to consider the importance that intellectual property protection plays in the growth and development of their business. If a company wants to become an established, successful business, the company needs to behave in the same way as an established, successful business—focusing meticulously on maximizing the return on every dollar spent.

3.1 IP Strategies at the Early Stage

Intellectual property (IP) rights are commercially valuable business assets that startups and small businesses should seriously consider investing in order to remain competitive in the marketplace. Taking proactive steps to secure these rights in the company's intellectual property will provide a number of benefits to the company. For instance:

(1) IP rights often increase the value of a business by securing monetizable intangible assets in the company's asset portfolio.
(2) IP rights give a company a competitive and marketing advantage.
(3) IP rights protect a company's position in the market and provide investors with a sense of reassurance in their investment in the company.
(4) Securing IP rights increases the company's credibility with customers and investors.
(5) Securing IP rights today provides the business an opportunity to monetize the IP later via a sale of the IP, using the IP internally as the business is built or licensing-out the IP which can generate royalty payments.

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_3

3.2 Consult with an Intellectual Property Attorney

The advice of an experienced IP attorney is a key strategic asset to an early-stage company during the development of an intellectual property portfolio. A well-managed and organized IP portfolio is attractive to potential investors at all stages in the life cycle of the business's development and could even be used to secure other forms of financing, such as loans and lines of credit for the company.

Some early-stage companies may view hiring a patent attorney as prohibitively expensive and may attempt to secure intellectual property rights on their own. While legally the company is able to do this as a *pro se* applicant, meaning that the applicant is representing him or her own self, it is advisable that the company works with an experienced intellectual property attorney. The quality of your patents, copyrights, and the protection of your other IP rights will impact your business valuation and ability to get funding.

Intellectual property is a highly specialized area or law. By way of example, patent attorneys have to take a special registration examination, or patent bar examination, in addition to being bar admitted in at least one state (like lawyers in other legal practice areas) in order to prosecute patent applications at the United States Patent and Trademark Office (USPTO). There are also specific technical qualifications that patent lawyer must have in order to even be eligible to take the registration examination. These requirements make patent lawyers very knowledgeable not only about both technological aspects of inventions, but also about patent law.

In an effort to allay an early-stage company client's concerns regarding legal fees, some law firms offer early-stage company clients special fixed-fee rates that are available exclusively for startups and early-stage company clients. For example, when filing for a patent, the early-stage company client may pay a reasonable predetermined fee for the patent filing and prosecution, regardless of how many hours the IP attorney actually spends on prosecuting the patent. This pricing model generates value for the company as patent prosecution can potentially require many back-and-forth communications between the patent prosecutor (i.e., the lawyer) and the examiner assigned to the patent application at the USPTO.

Additionally, some law firms will negotiate a payment structure with early-stage companies. A busy early-stage company, with limited funds now, needs a law firm that understands the company's financial situation. For instance, while there is an initial up-front cost for filing a patent (the cost of preparing the application for submission to the USPTO and payment of the filing fees), other costs associated with the patent can be paid at a later date as those costs arise; i.e., the issuance fee can be paid at the time the patent is allowed or maintenance fees, which are due at three and a half (3.5), seven and a half (7.5), and eleven and a half (11.5) years after issuance of the patent, can be paid once they are due.

3.3 Begin Building an IP Portfolio and an IP Strategy

A good IP strategy allows the business to recognize the IP it owns and provides a strategy to protect, optimize, and monetize the IP. IP rights can serve as valuable business assets and can be monetized in several ways. For example, the addition of a patent, or simply a patent application, to an early-stage company's IP portfolio, makes the company an eye-catching investment opportunity to equity financiers, such as venture capitalists (VCs) and angel investors, who often view an early-stage company's attempts to obtain patent protection as a demonstration of dedication and commitment to striving for success. Pending patent applications can also be used by investors to assess whether the early-stage company will effectively be able to deter potential competition.

Owning issued patents, or even pending patent applications, can distinguish an early-stage company apart from other less confident business ventures. Although it is certainly not a requirement, some venture capitalists and angel investors will not even consider investing in an early-stage company that lacks protection of its IP portfolio. Both large investment banks and boutique private equity firms often have groups that specifically target investment funds at those small entities in possession of IP rights and other intangible assets. While the initial cost of prosecuting a patent may seem expensive to an early-stage company, the return on investment for obtaining a patent, or other IP rights, could secure the early-stage company the investment capital it needs to launch into a profitable and successful enterprise.

One of the first steps toward building an IP portfolio is for early-stage companies to develop a plan and put into place processes for transferring ownership of IP rights to the company. Sometimes, the management of an early-stage company becomes so involved in getting the business off the ground that they fail to take this critical first step toward securing IP rights, causing problems down the road as to who owns the IP. Ownership of IP rights can be accomplished with a simple assignment or by including an IP ownership transfer clause in an employment agreement.

When it comes to an early-stage company investing in IP protection, start with a balance between which IP rights are most affordable to obtain and what IP rights will provide the most value to the company. Trade secret protection is the least expensive option in the short term, but it poses the greatest risk of being lost. Trademark and copyright protection are more expensive, due to registration costs, but can be highly valuable to a startup. Patent protection is often the most expensive form of IP protection, but patent rights could be highly valuable to a startup company.

3.3.1 Trademarks

Trademarks are one of the first steps in IP protection that an early-stage company should consider obtaining. In particular, getting trademark protection on a company or product name either during or shortly after incorporation can keep others from using such names in business.

3.3.1.1 Securing Trademark Protection for Company Names, Logos, and Product Names, Logos, and Designs

At the earliest stages of your company, it is important to prioritize what IP protections you need sooner rather than later and which IP protections can wait at least a little while until more funding is readily available to the company. Obtaining trademark protection for the company or product name is usually a good idea since the business will at some point begin to brand the business and product and customers and potential customers are going to associate the name to the business.

While there is no formal requirement that a trademark must be registered with the United States Patent and Trademark Office (USPTO), there are many benefits to federal registration of a trademark of the name of the company. For starters, federal registration of a trademark affords nationwide protection for the use of the mark in association with particular type of goods or services. If the mark is not registered with the USPTO, simply using the mark, or company name, will provide limited protection. At best, this protection is limited to the geographical area near and around where you are using the trademark in commerce under common law.

Filing a trademark application with the USPTO costs as little as $325 dollars. However, it is highly advised that early-stage companies retain legal counsel when preparing a trademark application. A trademark attorney knows how to complete the application correctly and knows the particulars of the trademark application examination process. Having a trademark attorney prepare and file your trademark application can cost anywhere from $600 to $2500 dollars, which is money well spent since trademark applications filed by trademark attorneys are twice as likely to be approved than those filed by an individual who is unfamiliar with the application process.

Trademark protection is not limited to company names; rather, trademark protection can be sought for any word, phrase, symbol, design, or image. An early-stage company can also obtain trademark protection on company logos, product designs, product logos, and product names.

Since funds are usually scarce at the early stages of a company's development, many companies have the funding only to obtain trademark protection on their company name and sometimes a logo, as these two marks are often critical when it comes to branding and marketing the startup and its goods or services. Early-stage companies may delay getting trademark protection for other aspects of their

business, such as product designs or product logos, until details concerning the product are further refined or finalized. A company goes through a lot of changes in the early stages, growing and pivoting as it forms a foundation to build a successful business upon. It would be a waste of funding to seek trademark protection on a mark or name that the company is not certain is critical to the growth and development of the startup into a successful venture.

3.3.1.2 Obtaining a Domain Name

In today's Web-driven world, it is essential that companies have a domain name in order to conduct business online. Web-based marketing and sales platforms are important for building a successful business, and one way that startups provide information to customers is through the Internet. A Web site is a powerful means of conveying information about the early-stage company and the goods or services that the company offers to customers. A Web site can also be used to facilitate sales or to take orders.

Many early-stage companies seek trademark protection of their company name, which they then in turn use as a domain name. By having trademark protection on the company name, startups often are also able to obtain protection of their domain name as well under trademark law.

Registering a domain name is straightforward. The domain name must be available and registered with a domain registrar that is approved by Internet Corporation for Assigned Names and Numbers (ICANN). There is usually a fee associated with registering the domain name that can be anywhere from $10 to $100 dollars depending on the name and the generic top-level domain associated with the name (i.e., the last extension on a Web address).

3.3.2 Copyrights

Copyright protection is about obtaining exclusivity and can be very beneficial to an early-stage company, but each company should carefully analyze whether copyright protection is right for them at the early stages of their business. Copyright protection is created in an original work of authorship at the moment that the work is created. However, copyrights are limited in their scope of protection.

Copyright protection allows for the protection of an "expression of an idea." A story, a painting, and a Web site layout—each can obtain copyright protection, but other people are not necessarily prevented from making similar stories, paintings, or Web site layouts. When there is an easy way to replicate the idea in a different means of expression, then copycats might be able to take advantage of your idea.

Example The limited, but in some cases highly useful, scope of copyright protection can be better understood by way of a few examples.

A graphic designer creates a unique new advertisement billboard for a dating site app for smartphones featuring a picture of a smartphone, a picture of the app, and a bold image of the app logo. Copyright protection could be obtained for the original expression of the idea, i.e., the whole ad. The background color and font style and color used in the ad, the images used, and the overall layout all together form the copyrighted ad.

Copyright protection for the dating app advertisement does not prevent other companies from using the same overall message in their advertising campaigns. A competitor could use a picture on a smartphone, a picture of their app, and their logo on a similar advertisement. So long as there is some element of original creativity different from the first advertisement, the competitor can use a similar overall design without violating copyright. As such, copyright registration might not be worth the cost.

On the other hand, a programmer can create and develop unique software code that does something in a new way that has never been done before, and obtain copyright protection for the new unique code. No one else would be able to use the copyrighted code without permission. Instead, those who would want to use the copyrighted code would have to either obtain a license or develop their own version of code. In this case, it might be a worthwhile investment to register the copyright of the code.

However, program code that gives way to an easy workaround, meaning that it would not take much to modify or use different code to achieve the same result as the unique code, might not be worth obtaining copyright protection on.

Although it is not required to register for copyright with the US Copyright Office in order to enforce the rights, there are many additional benefits conferred by registering the copyright. Copyright registration can cost between $35 and $55 dollars, and having a lawyer prepare and register the copyright for your company generally runs between $300 and $500. Copyright registration can be useful in that it simplifies matters when ownership is under dispute and expedites obtaining an injunction if infringement of the copyright occurs.

3.3.2.1 Web site Copyrights

For early-stage companies, copyright registration can be beneficial and can add value to the company. For example, a company's Web site is often the face of the company. A company Web site is what customers see online and interact with for online ordering, and the Web site is a representation of the company.

3.3.2.2 Valuable Works of Authorship

There are a number of valuable works of authorship that early-stage companies should consider protecting by obtaining copyright protection. In addition to seeking copyright protection on the company's Web site, many companies obtain copyright protection on their company logo, as this is what customers will come to identify with the brand and values of the company. Obtaining copyright protection on a company logo is a good idea as an alternative to trademark protection of a logo, especially in situations where the company is not entirely clear as to what specific category of good or services the company is planning to use the logo with. Trademark protection for a logo can always be sought at a later time, once the categories of the goods or services have been decided upon.

3.3.3 Opting for the Trade Secret Route

The most affordable, but least secure, form of intellectual property protection for early-stage companies is to opt for the trade secret route of protecting valuable information. A trade secret approach can protect any information that is of value to the company. However, like any other secret, it is only protected so long as the secret remains unknown to others. It is critical that the secret remains a secret. Once the secret has been disclosed to the public, trade secret protection is lost. While trade secret protection is free, putting procedures and safety measures, such as confidentiality agreements, sign-in procedures for guests at place of business, etc., in place to keep the trade secret information secret can be costly and less effective than other IP protection strategies.

3.3.4 Patents

Patent protection for a technology startup is often critical. However, the high costs of obtaining patent protection can be daunting for an early-stage company. The cost of a typical provisional patent application ranges from $1000 to $7000. The cost of a typical non-provisional patent application ranges from $8000 to $12,000, or more. There are many costs associated with "prosecuting" the patent application (i.e., negotiating with the USPTO to obtain the patent), which can be from $2,000 to $10,000. Once the patent issues, there are additional costs for maintaining the patent, i.e., maintenance fees that must be paid to the USPTO at three and a half (3.5), seven and a half (7.5), and eleven and a half (11.5) years after issuance of the patent.

There may also be the cost of litigation, if any is required, to enforce the patent. While these are all necessary costs incurred during the patenting process and during enforcement of the patent, a determined and savvy early-stage company would be

looking for a way to make the cost associated with procuring patent prosecution services more manageable. For instance, there are ways that a company can reduce the up-front costs for securing patent protection, or can seek a reduced rate on fees for obtaining patent protection with the United States Patent and Trademark Office.

3.3.4.1 Taking Advantage of Microentity or Small Entity Status

An early-stage company might be eligible to claim small entity status or microentity status. These filing status indications entitle filers to reduce rates associated with filing applications with the patent office.

- **Small entity status**. Small entity status can be claimed by an entity, which entitles the company to a reduction in patent office fees of fifty percent (50 %). To be eligible for small entity status, the small business must be considered a "small business concern," meaning that the small business must employ no more than five hundred (500) employees and that the small business has not granted, assigned, conveyed, or licensed the rights to the invention and has no obligation by contract of law to do so. However, if the small business has licensed or transferred the rights to the invention to another, small entity status can still be claimed if the other party also satisfies the small entity status eligibility requirements. The small business must also provide a written assertion to the patent office that the startup is entitled to small entity status.
- **Microentity status**. When an early-stage company qualifies for small entity status, the company may further qualify for microentity status. Microentity status reduces a majority of the patent office fees by seventy five percent (75 %). To be eligible for microentity status, the company must not have a gross income more than three times the median household income in the year preceding the application filing. The company must also not be named on more than four (4) previously filed patent applications. Finally, the company must not be under any obligation to grant, assign, or convey a license or other ownership right to another entity that does not meet the same income requirements as the company.

3.3.4.2 Filing a Provisional Patent Application

Early-stage companies that are strapped for cash have the option of filing a provisional patent application with the USPTO first, which serves as a placeholder for an effective filing date of the patent application and then filing a full non-provisional patent application within one year of filing the provisional application. By filing a provisional application, which has a lower filing fee compared to filing a non-provisional application, the company effectively buys itself up to one year of time before it has to incur the higher costs associated with filing a non-provisional application. A provisional patent application costs less to file for two reasons. First, the filing requirements for a provisional application are less than

for filing a non-provisional application.[1] Second, the patent office will not do anything with the provisional once it is filed. The USPTO will not examine a provisional application and instead merely uses the provisional application as a placeholder for the effective filing date of the non-provisional application once it is filed. An experienced patent attorney can assist with preparing a provisional patent application after consulting with the inventor(s) of the invention and completing a preliminary invention disclosure. A sample preliminary invention disclosure can be found in Appendix A.

3.4 Early-Stage Companies Seeking Investors Need a Business Plan

When it comes to seeking investment from outside sources, investors interested in taking an equity stake in your early-stage company want to learn about your company by two means: your pitch and your business plan.

The pitch is a short dialogue that conveys your business idea and explains the basics of how the business works. With the pitch, you are trying to get potential investors interested in your company. You are trying to sell investors on your business idea with your pitch. This is why it is sometimes referred to as your "sales pitch" for your company.

The business plan, on the other hand, contains all of the relevant details about your business. A business plan provides startups with the chance to carefully consider every aspect of their business, their growth strategy, and their exit strategy. A business plan is an essential tool for raising capital for your startup through equity funding, and an early-stage company can not hope to get very far without one.

A well-polished business plan is a comprehensive detailed map of the company's strategy for growth and development that lays out specific financial benchmarks that the company aims to achieve upon raising funds. Not only are anticipated amounts of funding listed in a business plan, but the business plan also details exactly where, why, and how much of the company's funding will be spent toward certain aspects of the business. Investors want to know where their money is going to go if they choose to invest in your company, and a detailed and realistic business plan provides investors with a road map of where you envision the company going in the future once funding has been secured.

Each expenditure identified in the business plan needs to be justified. When the justification for an expense is well thought out and makes sense in light of what the company is doing, investors are more inclined to take the company seriously.

[1]The details of what is required in the filing of a provisional patent application can be found in the patents chapter of this book.

Additionally, if a company wants to take advantage of the offerings of a business incubator or accelerator, a high-quality business plan is essential.

3.4.1 Integrating an Intellectual Property Strategy into a Business Plan

One aspect of a business plan that can be immensely beneficial is the incorporation of an intellectual property strategy into your business plan. IP is a considerable asset for many early-stage companies, and as such, an IP strategy should have a significant role in a company's business plan. Having a well-crafted IP strategy as part of your business strategy addresses issues such as how to keep competitors at bay and how to keep others from stealing or using your intellectual property without permission. In addition, the business plan will allow potential investors to evaluate the IP strategy and how the company plans on executing the strategy.

It is important to indicate in your business plan several points about your IP strategy. Specifically, your business plan should identify any IP assets that the company already possesses, or is in the process of procuring, and should indicate the status of each IP asset in the startup's IP portfolio. The business plan should also identify any other intangible assets that contribute value to your startup.

The business plan also needs to identify any plans for future procurement or use of IP assets, what they are, and how they will be secured or protected. For example, how the IP asset will be used to generate revenue for the company. Another example would be whether the startup plans to license certain IP rights from others in order to expand and grow the startup.

3.4.2 IP Due Diligence

Having an IP strategy as part of your business plan is useless if it is not supported by due diligence. This means developing a thorough understanding of what IP assets are owned by the company, generating complete and correct ownership documentation for all IP assets, having any and all necessary IP transfer agreements in place, and implementing practices and procedures to keep your company's IP assets safe.

But due diligence is not just about knowing what IP assets you have to work with. It is also about having a deep knowledge of your competitor's intellectual property assets and having an understanding of the intellectual property landscape of the relevant technology area in which your company competes. Investors will want to know what research you have done on your competitors' IP strategies and portfolios, and how you plan to keep up-to-date on any recent developments in your competitor's IP as well as the IP landscape in your relevant technology area as your

company grows. A competitive analysis of the company's IP versus the competition is an important part of the business plan. This analysis will document the start-up's differentiation as to its IP.

3.4.3 IP Portfolio Development Plan

Every early-stage company should have an IP development plan, and a business plan is the perfect opportunity to lay out a company's IP portfolio development plan for investors and service providers to evaluate. The plan should include a rough timeline as to when the company plans to file for its various intellectual property protections. The plan should also include any details regarding whether the company intends to solicit IP licensing agreements from other entities and identify what those entities are.

3.5 Joining a Business Incubator or Accelerator

One way that early-stage companies move from the early stage into the growth and expansion stage of development is by participating in a business incubator or accelerator.

A cluster of quasi-related burgeoning businesses often make up a business incubator. These businesses share a workspace where they can all operate harmoniously. Incubators provide the businesses with services and access to office equipment, telecommunication/Internet services, and reception services. Incubators also provide participants with an extensive network of well-connected professionals, experienced mentors, and an array of specialized experts in the relevant technology field.

A business accelerator is intended for startups that are focused on reducing their time to market. Application to accelerators is often open to anyone. Once selected as a participant in an accelerator, the process moves very rapidly and is focused on team success, rather than individual development or mentoring. Accelerators are particular when choosing prospective participant companies. The primary focus of an accelerator is to provide participant companies with exposure to potential investors and, by the same token, provide investors with what can be considered quality, promising new startups worth investing in.

In order to participate in an incubator or accelerator, the startup or small business must apply and be selected for participation in the incubator or accelerator program. Application criteria can include as follows:

- The breadth and depth of the company's business plan,
- The composition and quality of the members of the business's management team,

- The likely capitalization capacity of the company's idea, and
- The estimated time to commercialization.

Typically, applicants are selected based on whether the applicant business is compatible with the other businesses in the incubator or accelerator and the space that is available for use. Incubators and accelerators also carefully consider the applicant company's business plan. Other considerations are also taken into account, such as whether special permits are required for the applicant business to operate and whether specialized equipment and/or laboratory space is needed. Once admitted to the incubator, participant companies typically stay for a period of three (3) to five (5) years. Once admitted to an accelerator, participant companies typically stay for less than a year and often as little as only six (6) to twelve (12) weeks.

There are a variety of benefits available to the participants of a business incubator. For example, the incubator environment is highly conducive to networking and professional development. Participant businesses are provided with numerous opportunities to connect with other professionals, entrepreneurs, and mentors. Inexperienced entrepreneurs can gain exposure to new ideas, garner tried-and-true business advice from successful serial entrepreneurs, and are encouraged to make connections and business contacts that they otherwise could never possibly establish.

Business incubators also offer educational programming for those businesses that are participating in the incubator. Entrepreneurship educational programming often includes seminars, workshops, lecture series, and panel discussions on various topics including strategies for approaching funding sources, pitching ideas to investors, managing intellectual property portfolio, media relations, the importance of marketing, and how to manage growth of the company.

The reduced costs associated with participating in an incubator are substantial as well. The workspace is offered to the business at a reduced rental rate. Furthermore, the incubator participants share overhead expenditures for the facility and split the cost of basic business operation essentials (electricity, Internet, utilities, etc.). Incubator participants also benefit from any volunteer initiatives instituted by the incubator. Many incubators have volunteer initiatives where professionals in the business community offer their time and expertise to incubator participants free of charge. Businesses within the incubator can receive targeted advice and professional services (such as legal, accounting or IT services) and the opportunity to make connections with these professionals as they work with the incubator participants to build a successful business.

3.5.1 Case Study: Techstars

One of the leading startup accelerators in the world is Techstars. With nearly ninety (90) percent of its participants being either active or successfully acquired, Techstars is regarded as a gold standard for startup accelerators. Techstars focuses

on technology-oriented startups, such as software or companies with a Web-based business platform, and accepts startups at virtually all levels of funding and development.

Upon acceptance into the Techstars accelerator program, startups work through a three-month-long mentorship program. Participants are given workspace for the duration of the program and money to cover living expenses during the program and are offered a $100,000 convertible note upon acceptance into the accelerator. Participants are given access to Techstars' extensive network of resources (i.e., accelerator alumni, founders, investors, and mentors) and are pushed to grow to their fullest potential. In exchange for participation in the Techstars accelerator program, participants must offer up six (6) percent common stock in their startup.

3.5.2 Industry-Specific Startup Service Providers and Specialty Incubators

If a startup is interested in taking advantage of the opportunities presented by participating with a startup service provider, the startup should consider whether an industry-specific startup service provider would be a good option for the startup. Certain startup service providers cater to businesses in particular industries. This approach can ensure that startup participants get access to the right type of workspace, advice, and technical assistance for their specific business endeavors.

3.5.2.1 Case Study: Healthcare Technology Incubator Rock Health

For healthcare-focused startups, you might want to consider working with a healthcare technology incubator. Rock Health, for example, is a nonprofit startup venture fund and incubator that focuses on supporting technologies and innovations that have a positive impact on health care and improve the healthcare industry. By providing funding and support to new ventures in the healthcare industry, Rock Health aims to get new and useful digital health technology to those who need it most. Rock Health works with startups that are developing Web-based services, mobile applications, and software as a service for healthcare companies and insurance providers.

Startup applicants who are accepted to work with Rock Health will participate in a five (5)-month-long incubator and will receive funding, office space, services, and other support. Participants will also gain access to Rock Health's extensive network of founders; partners such as Kaiser Permanente, Sanofi, Genentech, Deloitte, CVS Health, several hospitals, and health insurance providers; and sponsors including Quest Diagnostics, the Mayo Clinic, and GE.

3.5.2.2 Case Study: Culinary Incubator La Cocina

When an early-stage company is based in the food industry, there are specialized culinary incubators, such as La Cocina, in San Francisco, California. La Cocina prefers to work with minority and immigrant women entrepreneurs, but accepts all types of startups and entrepreneurs. Participants in the La Cocina incubator are provided with commercial kitchen space at an affordable price, educational resources, access to market opportunities, and technical assistance as they work to develop and grow their business. The La Cocina incubator focuses on reducing up-front costs to companies, while preparing participants for the highly competitive and strictly regulated world of food as a business.

The La Cocina program is a two-part program. After acceptance into the program, participants work through a six (6)-month-long preincubation period where they work on developing the foundation of their business. This period of time focuses on educating participants and providing technical assistance and support as the participants develop their products, work on their marketing, refine their operations, and learn to manage and control their finances. If participants successfully navigate the preincubation portion of the program, they move on to the incubation portion of the program. Participants will continue to receive support during this portion of the program as they continue to build their business to a sustainable level. Once all of the benchmarks for the incubator are met, participants graduate out of the La Cocina kitchen incubator and move their business to their own location, while retaining their connections to the La Cocina alumni community.

3.5.2.3 Case Study: Incubator Partnerships with Universities

Some startups are the result of extensive scientific research and development efforts by the startup founders in a particular technology area. When science-based startups are involved in research, as well as product development based on their research, they may be able to access specialized incubators and funding options, such as SBIR or STTR grants.

A number of incubators have partnered with universities, or the universities themselves have developed startup incubators. These partnerships enable incubator participants to gain access to university laboratory space, high-tech scientific equipment, and other infrastructure that is crucial for furthering the startup's research and development. Startups are able to get an incubator experience that is more closely tailored to their particular needs and focused on their niche of technology.

3.6 Summary

In conclusion, companies need to carefully plan their IP strategy as well as their business strategy at the early stages of development. A lot rides on the meticulous planning and precise execution of these strategies. While an early-stage company may not have sufficient funding to achieve everything that they would like to do at the early stage of development of their business, some aspects of the business and IP strategy should be prioritized. Below is a summary of essential IP and business items that companies must have at the early stage of development and items that it would be nice to have in the event that funding is available.

IP Strategy Must Haves:

- Talk to an IP lawyer.
- Trademark protection on the company name.
- Secure the company's domain name.
- File provisional application on any key inventions.

IP Nice To Haves:

- Skip over filing a provisional patent application, and go straight to a non-provisional patent application.
- Copyright the company Web site pages.
- Trademark protection on additional aspects of the company, such as a key product name or company logo.

Business Must Haves:

- Prepare a business plan.
- Prepare an IP plan.
- Prepare a company investment pitch.
- Conduct IP due diligence.

Business Nice To Haves:

- Introductions and meetings with investors.
- Participation in a business incubator or accelerator.

Chapter 4
Growth and Expansion Stage

Abstract When a company reaches the growth and expansion stage of development, funding becomes a little easier to obtain, and other sources of revenue begin to become possible. For instance, there is a multitude of ways to monetize IP assets, and different strategies need to be employed based on the size and capital structure of the company. Leveraging an IP portfolio can provide many opportunities for monetization of those assets. IP assets can be used to collateralize a loan, or IP assets can be used to entice equity investors. An IP portfolio is also a significant strategic asset that can be used to leverage favorable outcomes against competitors.

4.1 Benefits of Leveraging IP During the Growth and Expansion Stage

Leveraging is a means of extracting value from an IP portfolio in a way that is to the competitive advantage of the IP-holder. There are many ways to leverage value from an IP portfolio. Methods for extracting cash from a portfolio include exploitation of the IP rights, licensing, or the sale of a part or of the whole portfolio. However, other avenues of monetization are available to an IP portfolio holder, which may not be readily apparent. For example, an IP portfolio could be used as a source for equity investments, as a collateral for a debt instrument, or as a security interest—any of which can be leveraged in various financing options.

According to the US Patent and Trademark Office, IP in the USA is worth approximately $5 trillion. It generally represents the most valuable assets for a business. Success depends on the ability to leverage these assets and execute an IP strategy.

A creative financial solution is IP-based venture debt financing at the growth and expansion stage of your business. IP-based venture debt financing is obtained by venture-backed entities, and money may be used as working capital or spent on equipment purchases. It is growth capital that is essentially a loan that requires repayment in full, plus interest. IP-based securitization is debt financing that utilizes collateralization of IP to obtain a loan or for establishing credit.

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_4

4.2 Leveraging IP: Strategies for Obtaining Debt or Equity Funding

Intellectual property rights can be important tools for entrepreneurs and companies that are growing when it comes to obtaining debt and equity funding. Young tech companies often face cash flow problems, and lack tangible assets, which can limit their financing options. Traditional financing might be difficult to obtain or could be too expensive to be feasible for the company. Debt and equity financing are alternative sources of funding that later stage companies can consider, and if they have IP rights, these rights can be used as collateral to secure loans or other debt funding, and these rights are attractive to equity investors.

4.3 IP Strategies at the Growth and Expansion Stage—Enhancing Your IP Portfolio

With any luck, at this stage in the game your business has secured some debt and/or equity funding that can keep your business up and running. When it comes to the next steps in your IP procurement plan, you should evaluate what IP is critical to your company's success at this point, and moving forward. Consider what intellectual property rights your business needs in order to enhance your portfolio. You will most likely have different IP at an expansion-stage company versus an early-stage company. Your IP strategy needs to account for these additional IP assets as to protection and strategy.

4.3.1 Filing a Non-provisional Patent Application

Once a company has secured some debt and/or equity funding, companies need to start thinking more seriously about enhancing their patent protection strategy. The patent application process can take years to complete, and since patent rights are granted to the first inventor to file for a patent, getting a patent application filed sooner rather than later can only be beneficial for a growing and expanding company.

Companies generally take one of three approaches when it comes to filing non-provisional patent applications. Either:

(1) The company chose to first file a provisional patent application (most likely with seed funding money) and needs to convert the provisional application into a non-provisional application,

(2) The company chose to first file a provisional patent application (most likely with seed funding money) and needs to file a non-provisional application claiming a benefit to the provisional application filing date, or
(3) The company chose to skip the step of obtaining a provisional application, but is ready for a non-provisional patent application.

4.3.1.1 Converting a Provisional Patent Application into a Non-provisional Patent Application

If your company filed a provisional patent application in the early stage of your business's development, it is important to take the next steps to convert the provisional patent application into a non-provisional application.

A provisional application is a placeholder for a regular, or non-provisional, patent application that may be filed in order to preserve an early filing date for the application. A provisional patent application acts as a placeholder for the filing date and will not be examined by the United States Patent and Trademark Office (USPTO). A patent applicant must convert any provisional patent applications into non-provisional patent applications within one year of the filing date of the provisional application. If the provisional application is not converted into a non-provisional application within the one (1)-year allotted time period after filing the application, the application will go abandoned.

A non-provisional patent application is a complete application that is ready for examination by the USPTO. Applicants can convert a provisional application into a non-provisional application. The conversion of a provisional application into a non-provisional application results in the term of any patent that issues from the converted application being measured from the filing date of the provisional application from which the conversion was made.

In some cases, the conversion of a provisional patent application into a non-provisional patent application might be considered to have an adverse patent term impact, since any patent that issues will only grant rights for twenty (20) years from the filing date of the provisional.

4.3.1.2 Filing a Non-provisional Patent Application that Claims the Benefit of a Provisional Patent Application

Conversely, if an applicant has a provisional patent application, but then files a non-provisional patent application claiming the benefit of the earlier filed provisional patent application within the allotted one (1)-year period after filing the provisional application, the term of any patent that issues from the non-provisional patent application with the benefit claim to the provisional application will be measured from the filing date of the non-provisional application.

Filing a non-provisional patent application and claiming benefit to an earlier filed provisional application give the applicant the benefit of the earlier filing date (i.e., the provisional filing date), but award a patent term on any patent that issues from the non-provisional application that spans twenty (20) years from the non-provisional patent application date. Many applicants choose to file a non-provisional patent applicant with a priority claim to an earlier filed provisional application, rather than converting a provisional application into a non-provisional one.

4.3.1.3 Filing a Non-provisional Patent Application

Many companies know that patent protection is a form of intellectual property protection they will need to secure, but are not quite ready to pursue a patent at the early stages of development of the business. For instance, they might need more time to flesh out their invention, might need to conduct proof of concept testing or market research before being ready to commit to investment in a patent, or simply not have enough funds in the seed stage to afford even a provisional patent application.

By the growth and expansion stage, however, companies begin to have a more concrete understanding of the direction their company is going to head in, and can better make informed decisions on how to move forward with their intellectual property plan. This is the time to file a non-provisional patent application.

4.3.2 Enhancing Your Portfolio with Trademarks

Many early-stage companies prioritize what trademarks are most important to them in the early stage of development, and seek trademark protection for only the most important marks first. At the early stages, a startup might focus on just one or two marks that best represent the company. Usually, startups seek trademark protection on their company name and, sometimes, their company logo at the early stage of development.

Other important trademarks, such as distinctive product packaging, product designs, product names, or product logos, might still be in development at the early stage of your company's development and are likely to change before it is time to actually roll out product. Early-stage companies usually delay in procuring trademark protection on these additional marks, until the designs are finalized and/or are market tested and until the company obtains additional funding to finance obtaining trademark protection for the additional marks.

Once equity or debt funding is acquired and the company has moved on to the early stages of growth and expansion, it is a good time for companies to revisit their trademark procurement situation and evaluate whether it is time to seek protection on any additional marks.

Perhaps the company's first-generation product is ready for market. In order to discourage competitors from stealing the company's intellectual property, companies should consider filing for trademark protection on product designs, logos, and layouts that are featured prominently in or on the product.

Example Take, for example, a company that has developed series of downloadable smartphone and Web-based games. King.com owns a number of trademarks for its now-famous CANDY CRUSH SAGA suite of games. CANDY CRUSH was the first-generation of the immensely popular game. King.com not only has a trademark on the name CANDY CRUSH SAGA,[1] but also has a trademarked logo design for CANDY CRUSH.[2]

After the initial success of CANDY CRUSH, King.com developed several spin-off games, which King.com is in the process of seeking trademark protection for at the time of this writing. By way of just a few examples, King.com has pending trademark applications with the United States Patent and Trademark Office for:

- A color version of the CANDY CRUSH SODA logo[3]
- The word mark CANDY CRUSH SODA SAGA[4]
- A color version of the CANDY CRUSH SODA SAGA logo[5]
- A monochromatic version of the CANDY CRUSH SODA SAGA logo[6]
- The word mark CANDY CRUSH JELLY[7]
- The word mark CANDY CRUSH JELLY SAGA[8]
- A monochromatic version of the CANDY CRUSH JELLY SAGA logo[9]
- The word mark CANDY CRUSH CARAMEL[10]

As each game saw market success, King.com developed a new game for the series and sought trademark protection for the most prominent features of each new subsequent game—the word mark for the name of each game in the series, as well as the logo associated with each game in the series.

[1]US Registration No. 4,541,423. Owner: King.com Limited Corporation.
[2]US Registration No. 4,884,489. Owner: King.com Limited Liability Corporation.
[3]US Serial No. 86383741. Owner: King.com Limited Corporation.
[4]US Serial No. 86427149. Owner: King.com Limited Corporation.
[5]US Serial No. 86375993. Owner: King.com Limited Corporation.
[6]US Serial No. 86375997. Owner: King.com Limited Corporation.
[7]US Serial No. 86732503. Owner: King.com Limited LTD.
[8]US Serial No. 86732458. Owner: King.com Limited LTD.
[9]US Serial No. 86847934. Owner: King.com Limited LTD.
[10]US Serial No. 86825747. Owner: King.com Limited LTD.

4.3.3 Enhancing Your Portfolio with Copyrights

Just as it might make good financial and business sense to delay obtaining additional trademark protection until an early-stage company has more funding and a better idea of what trademarks are important to the company, companies might choose to delay in obtaining certain copyright registrations until additional equity or debt financing is available and the company has moved into the growth and expansion stage.

Growing and expanding companies can use copyright protection for a number of different aspects of their business. Copyrights are particularly useful for any company that builds its business on computer software, Web-based applications, or anything involving visual graphics. However, at the early development stage of the company, these copyrightable aspects of the business might not be completely perfected or in their final state, and it makes no sense to seek copyright protection if the work is not complete. But by the growth or expansion stage, a company should have these copyrightable aspects of the business worked out and finalized.

Going forward into growth and development stage of the company, investors are going to want to see that the company has its most important copyrights registered. A company can generate income from licensing its copyrights, and being capable of this is the type of marketability that investors are looking for in prospective investments.

4.3.4 Other Intangible Assets that Can Have Value for a Company

Companies should also carefully consider what other intangible assets they have to work with and see whether there is any way to generate value from these other intangible assets. Exploiting other valuable intangible assets can work for a company in two distinct ways. First, when it comes to equity funding, a company that has certain intangible assets lends credibility to the company and makes them a more secure investment. Second, certain intangible assets can make a company a more secure investment, and investors may be more likely to grant the company a loan with the knowledge that the company possesses certain intangible assets.

4.3.4.1 Identifying Potentially Valuable Intangible Assets

An intangible asset is any asset that is not physical in nature that has value. The value might not be easily quantifiable in terms of monetary value, but the intangible asset brings immense value to the asset holder, such as security, customer trust, or marketability. Some of the most common intangible assets are intellectual property

rights, such as patents, trademarks, copyrights, and Internet domain names, but other less well-recognized intangible assets include things such as:

- Brand recognition.
- Goodwill (which has more relevance for later stage companies).
- Reputation.
- Unpatented proprietary technology.
- Various agreements, such as:
  - Licensing agreements.
  - Technology sharing agreements.
  - Technology development agreements.
  - Employment agreements.
- Regulatory approvals or licenses, such as:
  - OSHA approvals.
  - FDA approvals.
- Trade secrets, such as business methodologies, secret formulas or recipes.
- Customer lists.
- Preorders or an order backlog.
- Customer relationships.

4.3.4.2 Entering into Agreements to Extract Value from Intangible Assets

Agreements can add a lot of value to a company and can make a company a more secure investment. A few examples include the following:

- **Employment agreements**. Employment agreements can carry value for a company in a couple different ways. First, an employment agreement can demonstrate that the company has secured highly qualified workers for the development of their products or business. Second, when the employment agreement contains IP transfer clauses, such that the intellectual property developed by employee is transferred to the company, the company can benefit from the employee's inventions and intellectual works.
- **Technology development or sharing agreements**. Partnering with other entities with known expertise in a particular area of technology can be a boon for a company, especially if that agreement is made in writing. Exclusive agreements to the effect can also be valuable.
- **Customer agreements**. Preorders or back orders are effectively customer agreements that the customer intends to purchase the company's product or service when it becomes available. Having these orders in place can provide security to potential investors.

4.3.4.3 Intangible Assets that Make a Company Investment-Worthy

There are a number of intangible assets that might make a company a more secure investment than if the company did not have these intangible assets. For example:

- **Having the necessary regulatory or agency approvals**. When a company has already obtained the necessary regulatory or government approvals, it demonstrates to investors how serious the company is and also is a sign that these hurdles have already been overcome.
- **Certifications or registrations**. When a company is in a particular field that requires certain certifications or registrations, already having these certifications and registrations in place shows forward thinking and commitment to the company's long-term success. It also could provide third-party data as to the viability of the company's product.
- **Having a ready and waiting customer base**. When a company has a customer base that is eagerly awaiting the company's product or service, it is a good indication that the company will meet with success, at least initially. Preorders are a good indicator that the company will see at least some initial success, which can make investors more likely to provide debt or equity financing to the company.

4.3.5 Utilizing Trade Secret Protection

There are a number of ways that companies can extract value from these other intangible assets. For instance, some assets are ineligible for intellectual property protection under the framework of a patent, trademark, or copyright. In such cases, companies are still able to extract value from these assets by way of trade secret protection for unpatented proprietary technology. Trade secret protection allows the company to use the unpatented proprietary technology to gain a competitive edge in the market.

4.4 Using IP Rights as Leverage in Business

A strong primary offensive weapon for a business to have is the ability to bring an infringement lawsuit against competitors. A company can also use licensing and the threat of (or actual) litigation in order to generate revenue from its IP assets.

Example Although Fujitsu is not a small company, Fujitsu understands the value of leveraging IP assets. In the early 2000s, Fujitsu became involved in an infringement suit with Samsung over Fujitsu patents pertaining to basic

technology for plasma display panels. The litigation came after Fujitsu had tried for years to negotiate compensation from Samsung. When negotiations did not produce the desired outcome, Fujitsu pursued remedies through the court system on two fronts. First, Fujitsu filed suit in Tokyo, Japan, asserting Japanese Patent No. 284,518 and seeking injunctive relief. Next, Fujitsu filed suit in US Federal District Court in Los Angeles, California, asserting 10 US Patents. Samsung countersued, challenging the validity of Fujitsu's US patents. The Japanese court granted Fujitsu's injunction, and within two months, the parties reached a settlement agreement. The resolution involved the execution of a cross-licensing agreement between the parties.

Licensing and cross-licensing are other techniques used by Fujitsu to leverage its IP. Cross-licensing is a way to ensure business flexibility. Several large corporations have entered into cross-licensing agreements with Fujitsu, including Samsung Electronics, International Business Machines, Motorola, Texas Instruments, Hynix, ARM, and Intel Corporation.

When deciding whether or not to aggressively pursue an offensive IP strategy, the business must be willing to back up any infringement allegations that it might assert. There are several measures that should be considered when putting together a strong offense:

(1) Are the business's competitors litigation averse (i.e., do they have a history of settling litigations quickly)?
(2) Is the business willing to use the threat of litigation (or actual litigation) in order to enforce the IP rights or gain a strategic advantage over competitors?
(3) Is the business willing to monetize its unused IP assets through franchising, licensing, or sale?
(4) Is the business willing to develop IP assets solely for the purpose of monetizing them?
(5) Is the business willing to search for and purchase IP assets and other assets from those that are available in the marketplace?

All of these measures should be considered carefully when crafting a winning offensive strategy. A company should carefully weigh the risks and benefits prior to embarking upon an IP strategy that incorporates an aggressive offense as a central part of its strategy. Such a strategy will only be successful if it has the full support of the management and directors of the company, as it will take up large portions of the company's resources.

When a company has a history of leveraging their IP assets in litigation or licensing agreements, it demonstrates that those IP assets have known and established monetary value. This can be helpful when making valuations of IP assets for the purpose of securing a loan or line of credit for later stage companies. Assuming the company has positive cash flow to repay the debt, lenders are more inclined to lend money to a business that holds IP, which has successfully been leveraged.

4.5 Partnership Funding/Strategic Investments

Some companies that are in the growth and expansion stage might find themselves approached by other entities about partnership funding or strategic investment opportunities. Partnership funding involves a company partnering up with another business or corporate entity for business development purposes. The partnership could result in an agreement to share revenues generated from the partnership or could involve an exchange of equity ownership for services or other benefits. Whatever the case might be, both partners aim to benefit from the business relationship.

Strategic investment involves a business or corporate entity investing in a company with a specific business strategy in mind. Usually, the perks of strategic investment are greater for one party initially than for the other, but with time, the benefits to the other party eventually pan out evenly. Typically, a larger company will approach a smaller company about a strategic investment in the smaller company. The smaller company often gets the benefit of associating itself with the success and brand of the strategic investor, while the investor gains access to the smaller company's technology or gets an exclusive business relationship with the company. Alternatively, sometimes a future customer will strategically invest in a growing or expanding company so that the customer and the company can have successful business relations in the future. These investments are often contractual, so the company is legally obligated to perform the terms of the contract, or be in breach.

4.6 Licensing Intellectual Property

At this stage in development of the company, it is time to start considering whether licensing intellectual property rights makes good business sense for the company. Licensing IP can be used to learn about and use others' technology. IP-holders may exclude others from using their protected IP. Licensing agreements are effectively grants made by the IP-holder to others that grant access to the protected technology and trade secret information, while creating a revenue stream for the IP-holder. For example, a high-technology consumer electronics company may need to license proprietary manufacturing equipment from others. Conversely, a company may consider licensing its product along with a trade name and marketing campaign to a third party to create a larger distribution network and generate revenue from a larger market. Finally, IP rights can be licensed or, in some cases, cross-licensed to prevent or resolve litigation.

4.6.1 What Is An Intellectual Property License?

An IP license is a contract between two parties allowing the licensee to use at least a portion of the licensor's intellectual property in exchange for some consideration. Some examples of what the licensor receives are as follows: a lump sum, multiple payments, royalty stream, goods, services, a cross-license to the licensee's IP, or combinations thereof. Where there are multiple payment types due during the term of the license, the payments may be tied to the sale of goods or services provided or sold (e.g., as a percentage of gross or net revenue for a product that the licensee is selling). Technology transfer agreements, which are often used by universities to capitalize on research and development, often involve an up-front minimum payment as well as a stream of royalty payments.

Example In 2015, startup company Embark Veterinary sought to bring DNA testing to the dog world. Embark's business model was to enable dog owners to test their dog's DNA with the Embark Dog DNA Test so that owners could learn more about their dog's disease risk, hereditary information, ancestry, and other important genetic information. The technology behind the doggie DNA test is advanced, and Embark Veterinary licensed the technology it needed to develop its dog DNA test from Cornell University.

4.6.2 Factors to Consider in an IP License

There are numerous factors that need to be considered in an IP license which are unique depending on the facts and circumstances presented and rarely, if ever, are two licensing deals the same. Such factors may include what rights to license, term, territory considerations, exclusivity, the amount and structure of the royalty, and indemnification from damage caused by the other party. Special consideration is also required if a license relates to the use of a licensor's trademark. These issues are discussed briefly below.

4.6.2.1 Identification of Rights to Be Licensed

Patent rights include the right to exclude others from making, using, selling, or offering for sale a patented article or process. By licensing a patent, the patent holder is giving permission to the licensee to no longer be excluded from practicing the patented invention. Patent rights are territorial and are limited to the country in which the patent is granted. Trademark rights are the right to use a trademark in

connection with goods or services and are also territorial by country. Other rights can provide access to a proprietary or trade secret technology or know-how.

Example A startup produces a line of innovative medical technologies and devices, which it has made available for sale either directly from its startup company Web site or through authorized distributors and resellers. While the startup holds the IP rights to a particular medical technology or device that is for sale, it has granted the authorized distributors and resellers the right to sell its products.

When creating a licensing agreement, the startup company should identify the rights that are going into the license. This could include the rights of one or more of the patents directed at the particular device or technology, as well as the know-how related to manufacture of the product, trademarks associated with the product, whether registered or unregistered, and possibly trade secrets, such as the product formula, if there is one.[11]

As patent rights are for a limited term (the maximum life of a patent being twenty (20) years from the earliest filing date) and any patent license would automatically terminate once the patent expires, it is beneficial to also license intellectual property rights that do not expire, such as a trademark and/or technology and know-how for manufacturing the product so that the license does not have a fixed term.

4.6.3 License Restrictions

A license allows the licensor to restrict a licensee's activities to something less than an unlimited right to use the licensed intellectual property. For example, a patent licensor may choose to grant a licensee to one or more of its rights to make, use, sell, or offer for sale a patented product.

Another restriction is whether the licensor is granting an exclusive, sole, or non-exclusive license. An exclusive license is similar to an assignment of the IP rights to the licensee, and the licensor foregoes the ability to use its own IP rights in favor of the licensee. An exclusive license presents the most value to the licensee because it prevents all competition from using the licensed IP rights and is often granted by research institutions that have no intention of commercially exploiting an invention. A sole license, in contrast to an exclusive license, allows the licensor

[11]Divulging trade secret information, even under the terms and safeguards noted in a license, can involve the risk of loss of the trade secret, and often, it is beneficial to structure the license so that a trade secret is not divulged.

to continue to use the IP rights, but limits the licensor from granting any further licenses to third parties. Thus, in a sole license agreement, both the licensor and the licensee may use the technology under license. A non-exclusive license allows the licensor to grant multiple licenses to third parties, which allows for multiple companies to use the licensed technology, which increases competition.

Various types of restrictions can also be included in a licensing agreement. For example, territorial restrictions are a common restriction in license agreements. A license should explicitly define the licensed territory or geographic area where the licensee may use the licensed technology. It is very common in licensing agreements for a company to only be permitted to service a limited geographic territory. In exchange for the territorial limitation, the licensor will not make a similar grant to any third party allowing the third party to compete in this same restricted area. This is a very common practice in the operation of franchises.

Field-of-use restrictions are also frequently included in licenses and may limit the use of the equipment or components contained within the product to a specific type. Field-of-use restrictions could limit the use of the licensed technology to certain applications such as therapeutic applications, veterinary applications, and industrial materials applications. This allows a licensor to grant multiple licenses in various fields of use, enabling the licensor to exploit its IP more effectively.

Product restrictions can also be included in a licensing agreement. This limitation restricts the licensee's use of the IP to a particular class of product. For example, a semiconductor company may license to a company the right to use its high-end, germanium semiconductors in a product that the company is creating for use in personal computers and mobile devices, specifically laptops computers.

Example Incorporating a popular song into the background of a television commercial can help solidify the memory of the advertisement in a viewer's mind. If the viewer of the commercial has a positive association with the song, likes it, or thinks it is catchy, the viewer will be more inclined to remember the advertisement, associate positive feelings with it, and may even look forward to seeing the commercial again. When a marketing company makes an advertisement and uses a popular song, the marketing company must procure a license to use the sound recording of the popular song. The label company that owns the song may put restrictions on the use of its song. For instance, the label may limit the use of the song to only commercials for a single product line or may require that the song only be used for tasteful advertisements.

4.6.4 Consideration

Consideration between parties to a contract regarding intellectual property rights can take many forms, but usually involves some form of payment. The most common are a lump sum payment and a stream of royalty payments (most commonly based on the number of products sold), as well as a combination of both. A lump sum payment can be used in a number of circumstances, such as settlement of past infringement, or when the technology is being transferred and the licensor is going to be working in the field. This type of royalty shifts the entire risk of success onto the licensee since the licensor receives payment no matter what happens. As a result, an up-front lump sum payment is often discounted from the amount that could be obtained by taking a stream of royalty payments over time based on the sales volume of the product. A stream of royalty payments over time based on the sales volume mitigates the risk that the licensee must take, because the licensee does not make any payments unless the product is selling. The licensor stands to receive a greater stream of royalty revenue if the product does well in commerce. A combination of some up-front lump sum payment to offset research and development costs incurred by the licensor along with a reduced stream of royalty payments is sometimes used to strike a balance for a licensor who wants some immediate payment and also wants to share in the success of the product.

Many licenses are structured so that a minimum royalty payment must be made during a given time period in order to maintain the license in force. This prevents a licensor from obtaining, for example, an exclusive license and then failing to take action to manufacture, advertise, or sell the product. Failure to meet minimum payments can act as a trigger for automatically changing a license from exclusive to non-exclusive, or for terminating the license.

Setting royalty rates is considered to be an art form more than a science. While some reference materials are available that provide "typical ranges" of royalty rates for a particular field, each situation is unique and must be reviewed independently based on all of the available information, such as the predicted market size, ramp-up time, and whether production is capital intensive. Additionally, the relative size and strength of the parties is often taken into consideration as well.

In addition to royalties, other non-monetary items can form the consideration. Cross-licenses may be obtained if both parties possess intellectual property rights that the other party desires. This may replace or offset some or all of the monetary consideration.

4.6.5 Maintenance of IP Rights

There are a number of terms that should be included in a license agreement that relate to the maintenance of the licensed intellectual property rights. For patent rights, this should include the requirement that the licensee include the appropriate

patent marking on any goods sold that are covered by the patent. Lack of patent marking can limit claims for damages against infringers. Depending on whether the license granted is an exclusive license, the licensor may also require the licensee to pay patent maintenance fees. In some situations, a licensee may even take over prosecution of pending patent applications, which may benefit the licensor especially in the situation where the licensor is an individual or has limited resources to prosecute the patent application.

In trademark licenses, in order for the licensor to maintain its trademark rights, the agreement should require that any goods and services using the trademark identify that it is being used under license from the licensor. Additionally, to maintain the mark, the trademark license should have provisions for inspecting any products that use the trademark to insure that the quality of the goods is consistent with the licensor's standards. If a licensee does not maintain quality control over the usage of the trademark, not only can the licensor suffer damage due to poor quality goods being associated with the mark, but also the trademark right can be lost.

4.6.6 Other Terms

License agreements will generally include a number of other terms, some of which are discussed below.

(1) Representations and warranties are typically included from the licensor to the licensee and should include a statement that the licensor is, in fact, the owner of the IP rights being licensed and has the right to grant the license. This offers some protection to the licensee from fraudulent transactions. The licensor should also warrant that they believe the IP rights to be valid and should identify any known challenges to the IP rights. While a licensee should be conducting its own due diligence review of the IP rights being licensed, if the licensor fails to reveal this type of information, it can provide grounds for rescinding the license if the IP rights ultimately prove to be invalid.
(2) A license will often include terms regarding ownership and/or cross-licensing of further developments, in what is often termed a grant-back provision. From the licensor's perspective, this can be important if the licensor is also producing a product under the IP rights and wants to have the benefit of any of the licensee's improvements, which are based on the licensor's underlying IP rights. From the licensee's perspective, having rights to improvements may eliminate the need for a further license relating to the same products or services being provided under the licensed IP rights.
(3) The burden for obtaining regulatory approval, for example, from the FDA, should be designated in the license. For new product types, this can be a time-consuming process, and the burden for obtaining the required approvals should be specified. If the burden is placed on the licensee, this can be used as

a negotiating point to obtain a reduced royalty, at least during the time it takes to obtain the approval.

(4) In the event that the parties ultimately disagree over the meaning or enforcement of any provision in the license agreement, some form of dispute resolution should be included in the agreement. This should not only include a choice of law, but a forum for any action or arbitration that will take place. In order to avoid the time and cost of a court proceeding, many agreements now call for binding arbitration of any dispute between the parties. A "loser pays" provision has also become standard in most license agreements to avoid meritless claims.

(5) A termination clause is also standard in any license agreement and should, in addition to setting any fixed or renewable term limits for the license, include a list of circumstances or actions that will result in automatic termination of the license. Automatic termination will generally occur for non-payment of any royalties due, failure to launch, or market the product within a predetermined time limit, or bankruptcy of the licensee. Termination may also occur for breach of any other terms of the license agreement, generally after a notice and cure period.

A sample license agreement, which includes many of the above items, is attached in Appendix B.

4.7 Cross-Licensing

Cross-licensing occurs between two or more parties with symmetrical interests: A firm needs its competitor's patent just as badly as its competitor needs its patent. For example, specific technology industries utilizes cross-licensing frequently, with mutually beneficial results for the parties involved because the industry consists primarily of a limited number of players that produce similar products and hold similar IP portfolios.

Grant-back provisions in a cross-licensing agreement require the licensee to disclose and transfer back to the licensor any and all improvements that result from the licensee's use of the licensed technology during the licensing period. If there is no grant-back provision in the license agreement, the licensee could file improvement patents of its own, rendering the licensor's technology obsolete. It would be possible for the licensee to block the licensor from commercializing its own product if the licensee attempts to incorporate the licensor's improvements into the product.

Grant-backs can be exclusive, non-exclusive, or an assignment. Under an exclusive grant-back, the licensor is granted the exclusive right to use or sublicense any improvements created by the licensee. Conversely, the licensee retains merely a non-exclusive right to practice the improvements that it creates. In a non-exclusive grant-back provision, the licensee retains the title and rights to his or her improvements, but the licensor is allowed to practice the improvement as well.

Under an assignment grant-back provision, the licensee must assign all rights and title of any improvements to the licensor. However, the licensee still retains a non-exclusive right to practice the improvement it was responsible for creating.

4.8 Focus on Marketing, Partnerships, and IP

At the growth and expansion stage and the mature stage of development, it is important for a company to be focusing on growing their business and filling any gaps in their IP portfolio. Mezzanine financing is often large sums of money offered to late-stage development and mature companies, which typically attracts other investors as well, giving the company plenty of capital to expand and grow with. Since funding is less of a concern, companies can focus on building up their enterprise. Marketing, forming strategic partnership, and developing IP assets all can help add to a company's solid foundation.

4.8.1 Marketing the Company

Once your company is operational, you will need to focus your efforts on getting your company, brand, and product out to a larger market. Marketing is critical for drawing customers to your company, as marketing is the outgoing message that a company conveys to prospective customers. One wrong move and your marketing efforts could have an adverse impact, so it is important to carefully consider what your marketing strategy is and then execute your strategy precisely.

Marketing a company involves marketing on two main fronts: public relations and content marketing. Both public relations and content marketing reach your larger audience of prospective customers, and both are meant to convey that your company knows what its doing and has a great idea, and that customers should be interested in your company.

Public relations involve the management of the company's public image. It includes things like:

- Strategically deciding when and how to enter new markets.
- Who to associate with or what organizations to partner with, (i.e., getting endorsements from influencers in the target customer community, partnering with well-known organizations or other companies, etc.).
- Whether the company will publicly support a cause or community initiative.
- Deciding what kinds of marketing content to produce and how to disseminate that content to the prospective customer base.

The way that customers feel about a company can have an impact on whether the customer will purchase a product or service from that company. Since a company's public image often translates into the company's brand, it is important for

companies to carefully craft the company's public image and to foster and grow that image in the mind of the customer. A company or product brand can be a significant IP asset to the company over time. An asset a buyer would value and pay for.

Content marketing involves targeting marketing channels that are appropriate for your customer base and producing content, publications, and advertisements that draw customers to your business or Web site.

In order for content marketing to be most impactful, your marketing needs to be appropriate for your prospective customer base. Market testing is great for analyzing whether your marketing strategy is going to have the impact you need it to have. Your company can test out its marketing plan on a small group of target customers and assess what works, what does not work, and what could be done better.

4.9 Summary

In conclusion, the growth and expansion stage can be a very exciting time for a developing company. Money should be coming into the company, but money also needs to be spent to ensure that the company keeps growing. Below is a summary of essential IP and business items that companies must have at the growth and expansion stage of development, and items that it would be nice to have in the event that funding is available.

IP Strategy Must Haves:

- Expand IP portfolio with necessary additional IP.
- Identify and extract value from company's other intangible assets.
- Maintain existing IP rights.

IP Nice To Haves:

- Broaden IP portfolio to include non-essential forms of IP, which could be used as sources of revenue.
- Begin leveraging IP portfolio to get debt and equity financing.
- Start monetizing IP assets to create revenue for the company.
- Enter into cross-licensing agreements.

Business Must Haves:

- Consider how licensing IP could cut costs and generate revenue for your business.
- Focus on expanding your business through marketing.
- Consider what partnerships could be beneficial to your business.

Business Nice To Haves:

- Consider what partnerships could be beneficial to your business.
- Take steps to manage your company's image and public relations.
- Engage in targeted marketing to expand into new markets.

Chapter 5
Mature, Exit, and Rebirth Stages

Abstract Once a company has reached the mature stage in its development, the company should take the opportunity to fill in any gaps in their intellectual property portfolio. For example, the company should file for the trademarks that are necessary to round out the company's product line and should file the patent applications that are necessary for the company's next big product or endeavor. Mature companies need to start planning for the next steps that will be taken in terms of its intellectual property and business strategy. Does the company have an exit strategy? How will the company divest itself of its IP? Does the company need to take steps to revitalize the company by way of a rebirth? These are important questions that mature stage companies need to consider.

5.1 Reaching the Mature Stage with Your Company

It is well known that business ventures with thorough and comprehensive IP portfolios do better long term:

- Investors are attracted to strong IP portfolios.
- Companies with comprehensive IP portfolios are better prepared to fight and discourage competitors from infringing.
- A thorough IP portfolio can increase a company's valuation.
- Companies with IP assets are less likely to suffer bankruptcy since the IP assets could be sold to cover debts.
- Companies with well-managed IP portfolios make for attractive acquisition targets.

The benefits of having a thorough and comprehensive IP portfolio are countless, and companies can only benefit by bulking up on their IP at the mature stage of their company's development.

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5.2 Consider Expanding Patent Protection

By this point in the company's development, significant levels of financing should be available. Financing becomes less of a constraint on the company, which means that the company should consider fortifying and increasing its intellectual property portfolio with the additional financial resources that it has been able to obtain.

5.2.1 Expedited Patent Examination Options

At the United States Patent and Trademark Office, there are several different ways in which the examination of a patent application can be expedited. But obtaining expedited patent examination is often expensive. Many companies try to avoid paying extra for patent prosecution, but there may be situations where patent protection is needed immediately and the benefit of obtaining a patent in a timely manner outweighs the cost considerations. For instance, a competitor may be infringing on a company's product and may need a patent to stop the competitor's infringing activities, or an investor may be interested in the company, but wants to see that the company has a comprehensive intellectual patent portfolio before committing investment funds. At the mature stage of development, a company is more likely able to afford expedited patent examination.

When companies need patent protection in a hurry, there are some expedited processing options that are available at the patent office.

- **Accelerated examination**. Applicants can make a petition for accelerated examination, which is a program that aims to have a patentability decision made within twelve (12) months of filing a utility or plant patent application. The program is referred to as the Track One program. Patent applications that are accepted under the program receive special status and prioritized treatment. There are eligibility criteria for accelerated examination, such as a limit on the number of independent and dependent claims that can be filed in the application, and these criteria must be satisfied in order to take advantage of the accelerated examination process. There are also a number of actions that if taken by the applicant can cause an accelerated application to lose its special accelerated status. For instance, filing for an extension of time when filing a response to an action issued by the USPTO, or filing a Request for Continued Examination.
- **Paying for prioritized examination**. One of the easiest, but expensive, options for expedited processing is to pay for prioritized examination. This option gives a patent application prioritized treatment that will move it to the top of the examination pile each time the application is prosecuted by the USPTO. Prioritized examination will mean that your application will be examined out of turn, and thus you will receive responses back from the USPTO more quickly than usual, which will speed up the overall examination process. Prioritized examination is sought through the filing of a petition to make special.

  - **Petitions to make special**. There are certain reasons that a patent applicant can petition the office to give a patent application special treatment. While many of the reasons for making an application special generally will not apply to a company seeking expedited prosecution, other basis for a petition to make special is relevant to a company and its business activities. For instance, a petition to make special can be based on the infringing activity of competitors, or because an applicant is in the process of manufacturing a product that needs patent protection. Other bases for a petition to make special include the following:

    The applicant's age (i.e., the applicant is 65 years of age or older).
    The applicant's state of health.
    Whether the application is directed toward technology that is relevant to energy; countering terrorism; treating cancer or HIV/AIDS; biotechnology applications; and applications concerning recombinant DNA, environmental quality, or superconductive materials.

- **Patent Prosecution Highway**. If for some reason your company has a patent filing at a foreign patent office, a US patent application can be fast-tracked under the Patent Prosecution Highway program. The patent application must be filed in at least two patent offices (i.e., in the USA and any other participating foreign patent office), and if the foreign office indicates that at least one independent claim is allowable, the USPTO will expedite examination of the application.
- **Special pilot programs**. The USPTO often has special pilot programs that are designed to expedite prosecution. These programs are often limited in how long they are available to applicants, and they change frequently.

5.2.2 Continuation and Divisional Patent Applications

In some cases where a company has sought initial patent protection on a specific invention that is central to their company's business success, additional inventions might be generated from that initial successful invention. Modifications might be made, new aspects of the invention might be discovered, or improvements may be made to the invention. While these modifications and improvements could provide a competitive edge to the company, it is unlikely that these modifications or improvements are reflected in the original patent filings for the original invention. As such, the company may not have patent protection for these new modifications or improvements. In such a case, mature companies should evaluate whether expansion of their patent portfolio through the use of continuation patent applications, continuation in part patent applications, or divisional applications is appropriate and prudent.

A patent applicant can seek patent protection on improvements, new aspects, or modifications on an invention through a continuation application, a continuation in

part application, or a divisional application. These types of patent filings are often referred to as child applications, as they stem from an original, or parent, patent application.

Continuation and divisional applications are used when the original patent application contained disclosure of the modification, improvement, or aspect, but the modification, improvement, or aspect of the invention was not claimed. Continuation and divisional applications are useful since they get the same filing date as the parent application. Patents that issue on a continuation or divisional application generally also terminate or expire at the same time as the parent patent.

Continuation in part patent applications are used when the new modification, improvement or aspect was not previously disclosed in the parent application, and must be introduced in the continuation in part application. Any claims directed to previously disclosed subject matter that was contained in the parent application will be afforded the same filing date as the parent application. However, claims directed to the newly introduced subject matter contained in the continuation in part will be afforded the filing date of the continuation in part application.

5.2.3 International Patent Filings

Some mature companies decide that they want to take their product abroad and enter into foreign markets. Even if the company has patent protection in the USA, patent protection is limited to individual countries. Taking a product abroad and selling it may result in counterfeiting activity or a competitor might steal the company's product and sell it for a cheaper price. Companies that are considering entering into foreign markets should also consider obtaining patent protection in the countries where the company plans to enter.

There are two ways for a company to approach obtaining foreign patent protection. A company could file for protection in specific countries or could use an international filing in accordance with the Patent Cooperation Treaty (PCT).

When a company is only entering a small number of targeted countries, it may make more financial sense to pursue patent protection in each country individually. However, if a company is pursuing protection in several PCT participant countries, it may make more sense to file an international patent application and then seek protection in the desired PCT participant countries.

5.3 Consider Making Strategic Partnerships

A partnership can offer a mature company a great deal of synergy if the partnership is a good fit for the company's business goals. A mutually beneficial collaboration can do a wealth of good for a company and could be a means for generating

revenue. Oftentimes, companies partner up with a customer or a complementary business in order to generate synergy.

A customer can make for a good investment partner in many cases. A customer is already familiar with the company's business and may have something valuable to offer the company. The customer might become a vendor, supplier, support provider, etc., could provide contacts to other potential customers, and can offer invaluable feedback about the product, the company's marketing, or the customer's needs.

Complementary businesses also make for excellent partners since the company and the complementary partner can work together for mutually benefit. A company could address weaknesses in their business by partnering with a complementary business partner or could use a complementary business partner to better serve the company's customers.

These partners can be recruited to solve problems that the company might have or to provide experience and insight concerning a certain aspect of business that the company is lacking in.

5.4 Exit Strategies

It is always a good idea to have an exit strategy in mind as a developing company, because you never know when things might change or when an opportunity may come along. While the company's goal might only be to grow, it is important to at least discuss the possibility of other exit strategies because the future of a developing company is ever so uncertain. Companies should be appraised as to what exit strategy options may be available to them.

5.4.1 Being Bought Out

For some companies, the whole goal of building the business in the first place is to be bought out by a larger company or competitor. A buy out can provide the company with the money necessary to provide the entrepreneurs and their investors with a return. Being bought out is a very common occurrence for successful developing companies, as many large companies buy out smaller companies that they view as a potential competitive threat. Some larger companies even purchase small companies for the shear purpose of preventing their own competitors from buying them.

Examples

- Cloud startup Ravello entered into a deal to be acquired by Oracle for an estimated five hundred million dollars in 2016. Oracle plans to absorb Ravello as its own new Oracle Public Cloud group. There is speculation that Oracle bought Ravello so that its competitors could not.
- Yahoo bought New York-based mobile startup stamped in 2012 as a talent acquisition move.
- Microsoft acquired Palo Alto-based startup Metanautix, which specializes in data filtering technologies for an undisclosed amount and with no clear indication as to what purpose the acquisition is meant to serve.

5.4.1.1 Positioning a Company to Be an Attractive Acquisition Target

Some companies' primary business strategy is to utilize the contents of their IP portfolio as part of an exit strategy, with the goal of making the company an attractive acquisition target for larger corporations or competitors. Oftentimes, it is more cost-effective and a good business investment for a large corporation or competitor to buy up a smaller company that holds desirable IP, rather than to license the IP from the company or risk infringement litigation. This can often result in a high rate of return for the company since the buyer is paying for the IP, as well as the potential future benefit of the IP. If the company is not looking to be acquired, but is seeking to monetize the IP, the company could utilize a sale and lease back acquisition model whereby the company sells the patent to a competitor, but requires in the terms of sale a covenant not to sue, which is essentially a license allowing the company to continue using the protected IP without the consequence of infringement. Effectively, the company would capitalize on the patent without losing the right to use it.

Factors that make a company an attractive acquisition target include the following:

- IP portfolio breadth and scope.
- IP insurance.
- Complete ownership of the IP in the portfolio.
- The quantity of patent applications verses the number of issued patents.
- The overall quality of the IP.
- Comprehensive protection afforded by the IP in the portfolio.
- The remaining economic useful life of the IP.

5.4.2 Divestiture of IP

In today's high-tech world, it is readily apparent that transactions involving IP assets require a combination of technical, marketing, business, and legal expertise. These assets serve as both strategic and financial tools for growing a company into a successful company. An industry-focused IP portfolio can be worth a substantial amount of money if properly managed and utilized.

However, IP assets that are not contributing to the success of a company are sometimes ignored and neglected; these assets may not be achieving a good return on investment. Simply because IP assets are no longer relevant to a company's business plan does not necessarily mean the IP is worthless. Rather than ignoring the underutilized IP, the company could monetize the asset through divestiture, removing the IP from the portfolio and converting the asset into cash.

5.4.2.1 Selling IP

In situations where IP is no longer relevant to the business goals of a company, the company may decide to sell the IP rights. The company may have changed course, pivoted early on, or decided that a specific product line was not in alignment with the business goals of the company. Whatever the case may be, a company can look into shedding unnecessary intellectual property assets through a sale.

Since IP assets can be treated like any tangible asset, sales are often quick transactions, assuming that the valuation process for the particular asset is relatively straightforward. There is a whole industry dedicated to the sale of IP assets. There are some companies whose entire business model is centered on buying IP rights directly from the seller and then licensing those rights to others. A seller could also retain the services of a patent broker to assist in negotiating a sale.

A sale is usually a complete transfer of the rights to a new owner. However, sales agreements for patent rights have been known to include a license granted back to the seller/patent holder so that he or she may continue to use the technology covered by the patent in exchange for a small fee. This type of license is usually non-exclusive. Sometimes, the buyer retains a right to buy the license back, thus excluding the original seller from practicing the patent any longer. This right is usually reserved for situations where the buyer has plans to resell the patent to another party. The buyer-turned-seller may want to execute its right to buy back the licensing agreement because it is often preferred that the sale of a patent be unencumbered by licensing agreements.

Example In August of 2012, Nokia agreed to sell 500 of its patents and patent applications to Vringo, a mobile device software company. The portfolio consisted of international patents and applications, for which Vringo paid $22 million. Vringo made the purchase with the intent of monetizing the

patents, yet Nokia put conditions on the purchase that limited Vringo's ability to capitalize on its investment, including the requirement that a 35% royalty be paid to Nokia on any gross revenue generated by the IP sold, as well as placing limitations on (1) Vringo's use of those patents subject to licensing agreements implemented by Nokia prior to the sale and (2) Vringo's use of "essential" patents.

Examples of companies that act as direct buyers for intellectual property assets include the following:

- **Allied Security Trust** (AST) is a trust with members from several high technology companies, including IBM, Intel, Motorola, and Phillips. The trust buys patents directly from sellers.
- **RPX Corporation** is a patent risk solutions provider. It acquires patent rights, and for an annual fee, members can use the RPX patent aggregation as a defense mechanism to litigation.

Examples of IP brokers include the following:

- **Epicenter IP Group LLC** acts as a purchasing agent for its clients, contacting and negotiating the purchase of patents, while keeping their client's identity protected.
- **ICAP Ocean Tomo Private IP Brokerage** is known for its involvement in the sale of large or complicated IP portfolios during live auctions. Sellers can broadly market their IP in a competitive bidding environment.
- **Inflexion Point Strategy** (IPS) provides representation for technology companies in buying, selling, and investing in IP assets. IPS has developed a private sale process based on an auction model with multiple bidding rounds spanning 4–6 months.
- **Tynax** operates an online technology trading exchange whereby the client can either hire Tynax professionals to act as a broker on his or her behalf or can post his or her own portfolio on the online trading exchange.

5.4.2.2 Auctioning IP

Auctioning off IP is another divestiture option, with many benefits to both parties involved in the transaction. An auction provides the seller with the opportunity to set a minimum price for the IP, known as a reserve bid. Auction-style sales give the seller's IP marketing exposure and allow for the market to drive up the price. At the end of the auction, the seller can feel confident that he or she got the most for his or her IP as was possible. On the other side of the transaction, the buyer has informed and open access to the buying opportunity and is on equal footing with other

prospective buyers. With an auction-style sale, the seller gets market transparency and the benefit of price discovery. Auctions can be held online or live.

Example Nortel Networks Corp. was a Canadian telecommunications company that went bankrupt in 2009. To settle its debts, the company sold its physical assets at auction for a total of $3 billion and also sought to sell its patent portfolio of 6000 patents via an auction. In 2011, Google placed an initial bid of $900 million on Nortel's portfolio, but it was not enough. A few months later, an alliance of telecommunications companies, including Apple, RIM, Microsoft, EMC, Ericsson, and Sony, won the auction with a group bid of $4.5 billion. What is note worthy about this example is that 60% of the money generated by Nortel's asset sales was derived from the sale of its IP assets; Nortel's intangible assets were worth more than its tangible ones.

Examples of some IP auctioneers include the following:

- **Ocean Tomo Transactions** was a well-known IP auctioneering firm, hosting many live IP auctions around the world. Ocean Tomo Transactions joined forces with ICAP in 2009, forming the IP auctioneering venture ICAP Ocean Tomo.
- **Ip Auctions** offer an online auction forum for the sale of intellectual property assets.

5.5 Rebirth of a Company

Sometimes in business, a product or direction of taking the company does not work out as well as hoped. In these situations, a company needs to either figure out a way to give new life to the company or let the company die. Many companies choose to engage in efforts to initiate a rebirth of the company. This might involve a change in marketing strategy, a redesign of a product, or taking IP or the business in a new direction.

5.5.1 Spinning off IP into a New Company

Innovative companies invest heavily in research and development of new technology. Sometimes, the result is new developments in an area that is not the core focus of the company. While the ideas may be viable, commercialization of those ideas may not be feasible or in alignment with the business goals of the company. If the innovative technology lies outside of the company's core focus, a spin-off company could be formed around the new technology. Alternatively, a spin-off

could also be formed in the event that a company is looking to exit a particular line of business. A spin-off company is usually financed by outside investors where the funds are used to cover operating costs and further research and development of the IP.

A spin-off based on IP typically has the following characteristics:

- **A significant investment**. There has been a significant corporate investment and several years of research and development expenditure on the technology covered by the IP.
- **A complete design**. There is a complete product or prototype in an advanced phase of development ready to be commercialized.
- **An eager market**. There has been an expression of interest in the product from consumers in the industry.
- **Knowledgeable employees**. Key employees, such as engineers or scientists familiar with the technology, were available as part of the spin-off.
- **Short time to market**. The product is close to launch and is within a year of entering the market and generating revenue.

Example Agilent Technologies develops test and measurement tools and equipment for use in engineering, scientific, business, and government applications. Agilent was created as the result of a spin-off of Hewlett-Packard in 1999. Hewlett-Packard created Agilent because the measuring equipment products were commercially viable but were not related to computing technology, which is Hewlett-Packard's core focus. HP had made a substantial investment in its measuring equipment division, complete with product lines and a growing market to sell to. HP employees became Agilent employees since they possessed the skills and knowledge required to continue producing new and improved measuring devices. Manufacturing optical networking devices, biological, chemical, and electronic test equipment, scientific instruments, semiconductors, Agilent has remained a highly successful spin-off company.

Examples of companies that assist with IP-based company spin-offs include the following:

- **Blueprint Ventures** is a technology investment firm specializing in IP-based company spin-offs. They assist small entities and entrepreneurs in building a successful new enterprise.
- **CRG** focuses on creating spin-offs based on maturing technologies by tapping into emerging markets. CRG follows a business creation model that takes spin-off companies from the research and development phase all the way through product expansion.

- **New Venture Partners** works with corporations to cultivate attractive investment opportunities based on technology that could be spun off as a successful and sustainable startup company.

5.5.2 Cross-Industry Applications: Channel Programs

There are some situations where patentable inventions may have applications in another technology area, which should be considered and explored as it could present viable commercialization opportunities. For instance, when contemplating the sale of a non-core IP asset, it is worth investigating whether the patent could fetch a higher sale price in a different industry. The patentable technology can have useful applications in adjacent markets or could exhibit a wide scope of applicability across a variety of industries. Consider the following example. A microelectronics company holds a patent on an invention relating to the fabrication process for producing nanowires (wires that are nanometers in diameter) for use in microscopic electronic circuitry. A method patent of this nature could also be used for fabricating nanofibers from natural or synthetic materials, assuming that the method for fabricating the nanowires is not limited to the use of conductive materials in the fabrication process. Nanofibers are used in many industrial applications including textile manufacturing, materials science applications, filtration media, and biomaterials. A patent with such a wide impact in terms of industrial applications is highly valuable.

Similar to the manner in which channel programs work in business, establishing a channel program to sell off IP is another divestiture strategy that can prove highly lucrative. For example, a company seeking to shed non-core IP assets could establish a relationship with a non-practicing entity. Non-practicing entities typically build a business around a particular technology area. By partnering together in a channel program partnership, a symbiotic business relationship forms between the company and the non-practicing entity that is mutually beneficial. The non-practicing entity acquires fully developed IP rights, which the non-practicing entity could then either seek to litigate those rights or could license the technology, while the company generates income from its non-core assets.

5.6 Summary

In conclusion, mature companies need to think about continuing efforts to support their IP strategy and business strategy. By the time a company reaches the mature stage of development, funding is less of an issue, and IP and business "nice to haves" can more easily become "must haves." Below are a few key IP and business issues that mature companies need to consider.

IP Strategy Must Haves:

- A plan for further expansion and bolstering of the company's IP portfolio.
- A plan for seeking international IP protections, if applicable.
- An IP divestiture strategy.
- Begin leveraging IP portfolio to get debt and equity financing.
- Start monetizing IP assets to create revenue for the company.

Business Must Haves:

- A plan for forming strategic partnerships.
- An exit strategy for the business.
- A plan for revitalizing the company, such as the case with a company rebirth.

Chapter 6
Achieving Success Stage

Abstract The goal of starting any business endeavor is to achieve success; however, success is defined. Once a company has grown through the startup and growth and expansion stages, it is very likely that the company has encountered at least some successes along the way. Success could be signing a major customer, further development of their products, creating a brand, closing a follow-up round of financing, having a successful initial public offering, buying out a competitor, or being acquired by a competitor.

6.1 Defining Success

The definition of success when it comes to building a startup into a successful company can vary greatly from one company to the next. Each company's specific business goals are unique, so it is important to identify early on what your company's goals are and strategize on how to achieve those goals. For some companies, success is becoming an established and successfully operational business that is profitable. For other companies, success is defined by a high valued initial public offering, or by being acquired by a competitor for a great price. Success might mean signing a set number of new clients each month or earning a certain amount of monthly revenue.

Whatever your company's definition of success is, make sure to develop a plan for achieving your goals that is practical. You need to have measurable benchmarks so that you can track the progress of your company, so you can see progress toward your goals. Be consistent in your goals and do not change the goal posts. If you come up short, that is okay. Instead of focusing on small failures, focus on how to better achieve your goals in the future and reflect on what you could have done better.

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_6

6.2 Signing a Major Customer

Many companies define success as signing their first major customer. It is a huge milestone and is considered by many to be a validation that the company has the potential to be a viable business. However, signing a key customer is just a first step. We have seen companies be creative in landing an initial lead customer where the customer creates value to the company. Such ideas can be offering the customer a right of first offer should the company receive an offer to sell the company or provide stock options to the initial significant customer to sign a long term agreement. Once a customer is signed, the company has to work hard to keep that customer happy, provide a good product or service, and keep working toward reaching and signing new customers.

Examples

- In 2012, Austin, Texas-based semiconductor startup Javelin signed a significant major customer: Samsung Electronics, Co.
- In 2016, Australian startup company, Unlockd, signed a deal with Boost Mobile worth more than one hundred million dollars allowing Boost Mobile to white label Unlockd's advertising technology to Boost Mobile consumers.
- In 2014, startup SimpleRelevance, Inc., which provides customers with email marketing analytics that can improve e-marketing reach and impact, signed Allstate Insurance as its first major customer.

Initial success is good and should be celebrated. Signing one customer leads to revenue generation and increased confidence, which leads to more successes and signing more customers. Momentum builds, and it is okay to feel good about these accomplishments.

But companies cannot rest on the laurels after the first customer. Companies need to evaluate marketing techniques, create plans for scaling and expanding, and determine the next steps for the business.

6.3 Initial Public Offering

Once a company is at the point of being marketable, it can initiate an IPO, with approval of the board of directors, to raise additional capital. An IPO is the first public sale of stock by a company, thus moving the company from a private business entity to one that is available for public trading. A company can use its IPO earnings to pay off past debts, reinvest in the company, or pay out a dividend to its new shareholders.

Example In 2015, the e-commerce platform for sharing handmade arts and craft items Etsy, which started as a small Brooklyn-based startup a decade before, went public with an IPO that was toted as a huge success. Opening at sixteen ($16) dollars a share, by closing the shares had doubled in value to thirty two ($32) dollars a share.

Being a publically traded company can have its advantages. For example, the company can raise capital via the sales of its securities through primary or secondary markets, where privately held companies lack the benefit of free trade. Public trading activity can cause share prices to go up, creating investor confidence in your company. Also, publically traded companies tend to be in the news more often than private companies, which translates to free publicity for the company.

Being a public company also has disadvantages, such as the public disclosure of financial statements due to the mandatory filing requirements of the Securities and Exchange Commission (SEC). Publically traded companies are required to submit to the SEC an annual Form 10-K, which contains detailed information on the company's financial performance, as well as other disclosures, such as shareholder patterns, quarterly and annual financial statements, and profiles of the directors of the company. Additionally, there are many expenses associated with going and being public, all of which can tally up to a significant sum. Furthermore, if an IPO is not successful, the company can lose money.

6.4 Acquisition of a Competitor

While it may take a long time before a company reaches the level of capital and success necessary to acquire a competitor, some companies set the acquisition of a targeted competitor as a way to grow and reduce the competition. The reasons for acquiring a competitor are varied. For instance, the acquisition could provide the company with valuable talent by absorbing the competitor's employees. Alternatively, the acquisition could provide added value to the company's customer base by streamlining processes or making the end product or service more affordable for customers. An acquisition is also a good way to acquire the competitor's customers and convert them into customers for the company thus diversifying its customer base.

6.5 Suggested Timeline

Below is a suggested timeline as to what IP and business-related activities a developing company should focus on at each stage of the company's development. The below chart is merely a guide, and what will work best in terms of timing will depend on your company's particular situation.

	Stages of Company Development		
IP-Related Tasks	**Early**	**Growth/ Expansion**	**Mature**
Consult with an IP Lawyer	■	■	■
Trademark Company Name	■		
Secure Domain Name	■		
Copyright Website	■		
Protect Trade Secrets	■	■	
File Provisional Patents	■	■	
File Non-Provisional Patents	■	■	■
Convert Provisional Patent Application to Non-Provisional Application	■	■	■
Conduct IP Due Diligence	■	■	■
Create IP Development Plan	■	■	■
Enhance Trademark Protection	■	■	■
Enhance Copyright Protection	■	■	■
Extract Value From Other Intangible IP Assets	■	■	■
License IP Rights To Others	■	■	■
License IP Rights From Others	■	■	■
Cross License IP	■	■	■
Expand Patent Protection		■	■

Consider Expedite Patent Examination Options			
File Divisional Patent Applications			
File Continuation Patent Applications			
File International Patent Applications			
Business-Related Tasks			
Obtain Early Stage Funding			
Secure Personal Investments			
Obtain Funding from Friends and Family			
Develop Business Plan			
Market the Company			
Apply for Grant Funds			
Engage in Crowdfunding			
Leverage IP Assets for Debt and Equity Funding			
Seek Angel Investments			
Seek Venture Capital			
Obtain Series of Capital			
Obtain Tranches of Capital			
Join Business Incubator			

Join Business Accelerator			
Sign a Major Customer			
Apply for Loans			
Apply for Credit			
Issue Subordinate Notes			
Issue Preferred Stock			
Have an IPO			
Make Strategic Partnerships			
Acquire a Competitor			
Divest IP Assets			
Enter into Channel Programs			
Get Bought Out			
Spin Off Into A New Company			

Part II
Overview of Intellectual Property Rights for Startups

Chapter 7
Trademarks and Trade Dress

Abstract A trademark is a word, phrase, symbol, or design, or combination of words, phrases, symbols, or designs that identifies and distinguishes the source of the goods or services of one party from those of others. Trademarks promote competition by giving products and companies' corporate identity and marketing leverage. Startups in particular use trademarks to establish their brand and to protect their company name, company logo, and domain name. Obtaining trademark protection for a startup company's name is one of the first pieces of the intellectual property protection that a startup should consider. Trademark protection can be sought for a startup company's name as early as at the formation of the startup. Trademark protection of a company name prevents others from using that company name in any business matter in the same field of commercial endeavor as the startup, or any name that is confusingly similar to the startup's name. A company name that has trademark protection sooner rather than later can be a boon to a startup.

7.1 Trademarking a Startup's Company Name, Logo, and Domain Name

One thing that can lend support to the success of a startup is a great company name and logo. A name that is catchy, distinctive, and interesting can really pique the public's curiosity and can grab their attention. However, the startup environment is highly competitive, and a good name can be easily stolen without the proper intellectual property (IP) rights in place to protect the ownership of a company's name.

Finances are always tight at the outset of a startup's development, and founders need to assess the IP that needs to be protected immediately as opposed to the IP protections that can wait until more money is available. Trademarking a good company name is one of the first pieces of IP protection that a startup should put into place.

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_7

Obtaining a trademark on a company name is something that can be applied for as early as at the formation of the startup. Trademark protection of a company name prevents others from using that company name in the same field of commercial endeavor as the startup, or any name that is confusingly similar to the startup's name. Additionally, by obtaining trademark protection on the company name, the startup can then also use that name to register a domain name, which would also be protected.

Trademarking a company logo is also important, since logos tend to be one of the primary ways that consumers identify the source of goods or services. But in many cases, a startup's company name and logo are different marks: The company name is usually a name, while the logo is often a symbol or picture that represents the company. This means that the startup would have to register two separate marks, which increases costs, and many startups decide that registering a company logo is a piece of IP protection that can wait until later rounds of funding are secured.

Startups should seriously consider obtaining trademark protection, at the minimum, on the name of the company. Having a trademarked company name can bestow many benefits on a fledgling startup, including:

- Adding value to the company brand.
- Being attractive to investors and promotional partners.
- Providing constructive notice to others that the startup owns the trademarked name.
- Enabling the trademark owner to sue if someone else tries to use the trademarked company name.
- Entitling the trademark owner to statutory remedies in the event that someone else tries to use the trademarked company name, with the potential for seeking treble damages.

A company name that has trademark protection sooner rather than later can be a boon to a startup. Once the trademark protection is in place, the startup can begin to build a brand around their company.

7.2 What Is a Trademark?

Use of symbols or signatures to identify the source of goods has been around since people first started trading and selling goods such as pottery, weapons, and clothing thousands of years ago. The purpose of these marks, to indicate the product's source, has not changed to this day. What has changed, especially in the last one hundred years, is the protection afforded to trademarks. Currently, the USA protects trademarks under the Trademark or Lanham Act,[1] state law, and common law.

[1] 15 USC §§ 1051–1127.

Under the federal Lanham Act, a trademark is any word, name, symbol, device, or any combination thereof that is used to identify and distinguish goods or services of one source from those of another source. In short, a trademark indicates the source of the goods or services. The law also provides protection for other types of marks that are directed to different types of uses. Many of these different types of marks are common in startups, and the below table notes some of the key features of these different types of marks.

Type of mark	Key features	Example
Service mark	Used to identify and distinguish the source of services	*Lyft*[a]
House mark	A "house mark" generally refers to a trademark that is used in all facets of a company's business, including business cards, letterhead, packaging, and advertising. Typically, a house mark is also used with a secondary mark or can be used as a primary trademark	*HP*[b]
Trade dress	Trade dress refers to the overall impression created by a product that can be comprised of any combination of shape, color, design, and wording. If trade dress is functional, it cannot be registered or protected. Product design trade dress is not registerable until there is secondary meaning	*Texas Instruments*'[c] use of the outline of the state of Texas on its product packaging
Collective mark	Service mark used by the members of a cooperative, an association, or other collective group or organization, which indicates membership in a union, an association, or other organization	*The Institute of Electrical and Electronics Engineers* (*IEEE*)[d] indicating membership in a professional organization that is scientific and educational. The group works toward advancing the theory and practice of electrical, electronics, communications and computer engineering, as well as computer science
Certification mark	Mark used to certify regional or other geographic origin, material, mode of manufacture, quality, accuracy, or other characteristics of someone's goods or services, or that the work or labor on the goods or services was performed by members of a union or other organization	*ENERGY STAR*[e] for an international standard for energy efficient consumer products

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Type of mark	Key features	Example
Trade names	Used to identify a business or vocation. Trade names that merely identify a business are not registerable under the Lanham Act for federal registration. A trade name can also be a trademark if *used* as a trademark to indicate source. For example, Ford Motor Company can be both a trademark and a trade name	*GE Money Bank*[f]

[a]US Registration No. 4,698,330. Owner: Lyft, Inc.
[b]US Registration No. 3,801,893. Owner: Hewlett-Packard Development Company
[c]US Registration No. 3,717,043. Owner: Texas Instruments, Inc.
[d]US Registration No. 1,770,511. Owner: Institute of Electrical and Electronics Engineers, Inc.
[e]US Registration No. 1,999,485. Owner: Environmental Protection Agency
[f]US Registration No. 3,225,522. Owner: General Electric Co.

It is common to informally refer to all of the above terms as trademarks or "brands."

A trademark normally consists of a word, logo, or some combination of the two. A word mark can include known terms, abbreviations, something coined by the owner, or some combination of letters and numbers. A logo can be a design, stylized lettering, or a drawing of an object. However, there are other types of trademarks, including the following:

- Symbol (Apple's iconic Apple logo[2]);
- Shape (shape of an iPod[3]);
- Slogan ("*Just Do It*"[4]);
- Sound (NBC chime[5]);
- Color (3M yellow Post-it notes[6]).
- Scents (fruit-scented industrial lubricants[7]);
- Touch ("velvet textured" feel on bottle surface for wines[8]);

[2]US Registration No. 3,078,580. Owner: Apple Computers, Inc.
[3]US Registration No. 3,341,214. Owner: Apple, Inc.
[4]US Registration Nos. 1,875,307; 1,931,937 and 1,817,919. Owner: Nike, Inc.
[5]US Registration No. 0,916,522. Owner: NBC Universal Media, LLC.
[6]US Registration Nos. 2,402,722; 2,371,084. Owner: 3M Company.
[7]US Registration No. 2,463,044. Owner: Mike Mantel.
[8]US Registration No. 3,155,702. Owner: American Wholesale Wine & Spirits, Inc.

- Distinctive packaging (black-and-white cow print pattern on Gateway computer box[9]); and
- Building design (University of Texas's UT Tower—a clock tower with an observation deck overlooking the UT campus and the city of Austin, Texas[10]).

7.3 Choosing and Developing a Brand for Your Startup

Deciding on a company name and developing your brand are critical for the long-term success of your company and the two often go hand-in-hand. Your brand and your company name are primary ways that you market your product or services to customers; they represent what your company is and what your company does. Your brand and your company name communicate this message to your customer base, so it is important that the message you send to customers is clear, well-positioned, and audience appropriate.

A brand may be used to convey a company's promise to provide a certain level of quality to customers, or communicate a company's values. Branding is important, and getting it right at the outset is critical because as your startup grows, it will carry with it the brand that you have built. With every sale that is made and every relationship with a new customer that is forged, the startup's brand gains momentum, and this brand is what prospective customers will look to when deciding if they are willing to try your startup's offerings.

Most successful companies establish their brand early on, and then diligently stick to it, aligning business efforts with, and making business decisions that are consistent with, their brand strategy. Staying focused and consistent enhances the credibility of the company, the company's reputation, and demonstrates the dedication that the company has to its values. Customers support companies that they trust, and companies that are consistent in their brand foster customer loyalty.

Over time, customers begin to associate a company's brand with the company name and logo. Startups should carefully consider the timing of when trademark protection should be sought for their company name, so that the startup can start building their brand from the company's inception.

7.4 Non-protectable Subject Matter

Trademarks are only protectable if they are capable of distinguishing the goods or services of one owner from those of another. Therefore, generic marks cannot be protected and descriptive marks are only protectable with a specific showing that

[9]US Registration No. 1,725,231. Owner: Acer Inc.

[10]US Registration Nos. 1,230,438 and 3,148,092. Owner: The Board of Regents of The University of Texas System.

they have acquired distinctiveness. However, there are also additional types of marks that are not protectable.

(i) **Generic Marks**. A mark that is merely a generic name for the general class of product or service that is synonymous with the general class of product or service is a generic mark.
(ii) **Descriptive Marks**. Marks that merely describe a characteristic of a good or service are considered to be merely descriptive marks. Descriptive marks are often an adjective for the good or service.
(iii) **Functional Marks**. Non-traditional marks such as colors and product designs are not protectable if they are, on the whole, functional. For example, the color yellow has been found to be functional when used in conjunction with safety products.
(iv) **Surname**. Marks that are primarily merely surnames are not protectable absent a showing of acquired distinctiveness. MCDONALDS and FORD are examples of surnames that have acquired distinctiveness.
(v) **Immoral Or Scandalous Marks**. The Lanham Act specifically bars immoral or scandalous matter from protection.
(vi) **Likelihood of Confusion**. Proposed use or registration of a trademark may be blocked by a prior trademark holder under common law or federal registration rights if the proposed use is identical or is likely to cause confusion with the existing trademark rights.
(vii) **Geographic Descriptiveness**. Marks that are geographically descriptive cannot be registered until they acquire secondary meaning. An example of such a mark that includes a geographical location, but has acquired secondary meaning is TEXAS INSTRUMENTS.
(viii) **Names and Portraits**. Trademark protection is not available for marks that consist of the name, portrait, or signature of a living person without their consent.
(ix) **Dilution**. A trademark that dilutes the distinctive quality of a famous mark is not registerable even if no likelihood of confusion is present.

7.5 Selecting a Trademark

In most cases, the process for selecting a trademark is not simple, since it involves many, sometimes conflicting, priorities. Whether a company is a newly formed startup looking for a new house mark or a multinational organization looking for a mark for a new niche consumer technology product, a process for the selection of a trademark must be in place. The basic tenants of a typical selection process are discussed below.

7.5.1 Brainstorming Phase

During this phase, creative, marketing, and technical people develop a list of potential marks. If a company does not have the time or personnel to engage in a brainstorming session, it may hire an outside company that specializes in developing potential marks. Although such companies may be a good option, they can be very expensive.

7.5.2 Narrowing Phase

During this phase, either a person or a committee narrows the list of marks. Those on the committee should consider at least the following:

- The commercial appeal of the proposed mark.
- The legal strength of the proposed marks. As noted, arbitrary or suggestive marks are typically more easily registered and defended.
- Whether to add a design feature or stylization.
- Whether competitors have similar marks.

Although the marks should be ranked in order of preference, each of the marks on the final list should be acceptable to the startup company as a trademark.

7.5.3 Knockout Phase

Before going through the expense of a trademark search (which will be described at the next step), it is advisable to perform a "knockout" search to identify any obvious conflicts. A knockout search is a determination as to whether the mark will be difficult to register (because, for example, the mark is scandalous, likely to be confused with some other mark, or the mark is already registered). A knockout search may be performed in-house or by an outside attorney on the available databases of registered marks to eliminate marks that may be difficult to register or conflict with an existing third party's marks.

7.5.4 Clearance Search

If a mark passes the knockout phase, a clearance search should be conducted in the countries or jurisdictions of interest. A clearance search assesses the availability of the mark for use or registration. These searches are typically conducted by either outside law firms or in-house personnel with trademark expertise. A search should

include federal registrations, state registrations, common law marks, Internet domains, and Web sites.

When considering whether to conduct a full comprehensive search, consider the following points:

- How will the mark be used?
- How widely will the mark be used?
- Will the mark be used on tooling for the product or just on advertisements?
- Will the mark be used on television, radio, social media, etc.?
- How important is the mark for the startup company?
- Will the mark be used in different countries or in different languages?

In setting a budget for these clearance searches, costs are directly proportional to the number of countries for which protection is sought. In most cases, the difficulty of clearing a mark increases as the pool of potential problem marks increases. Therefore, a decision should be made early on as to the intended countries in which the mark will be used. Although using an in-house search may be cost-effective, it is generally recommended to have the clearance search performed by a law firm.

7.5.5 Obtaining a Legal Opinion

The final stage in the selection process is deciding whether to obtain a legal opinion as to the availability of a mark for use and registration in conjunction with a desired mark. Although obtaining an opinion based on the results of a search is not required, there are compelling reasons to obtain such an opinion.

First, it can be difficult to assess search results. This is especially true in an industry where there are many competing products in other industries or where the mark may be considered descriptive (such as the high-tech industry).

Second, although the clearance process can be expensive, the failure to clear a mark can be even more costly. The ramifications of selecting a potentially confusing mark are serious. An infringer faces both the prospect of monetary damages and attorney's fees if found to infringe; the resulting embarrassment and loss of marketing momentum, and the finding of infringement would likely result in an injunction prohibiting use of the mark.

Third, obtaining a favorable opinion is strong evidence that there was no bad faith in using the mark and also shows that the brand manager is exercising due diligence. Both of these factors are important to a court when assessing willfulness and to others who may decide to second-guess a trademark's selection.

7.6 Protecting a Trademark

7.6.1 Common Law of Trademark

In the USA, unlike most countries, unregistered trademarks and names enjoy common law protection. This means that the party who adopts and uses a mark in a particular geographic territory is entitled to protection against a subsequent user who adopts the same or similar mark in that same territory. The concept of "territory" is a relatively nebulous concept that depends on the nature and extent of the use of the mark. For example, a business such as a restaurant that has limited advertisement or recognition in an area may only acquire trademark rights within a limited radius of its location under common law of trademarks. By contrast, a large company that advertises nationally and has sales throughout the USA may conceivably claim trademark rights throughout the entire USA.

Although reliance on common law rights may offer an initial costs savings, common law rights have the several limitations set forth below:

- Limited to the particular territory where the mark was used;
- An innocent user who obtains a federal trademark registration may take over the rest of the country;
- Establishing common law rights is extremely fact sensitive. Accordingly, such rights can be difficult and extremely expensive to prove in court.

Example Google announced in July 2012 its entry into the Internet service provider industry as Google fiber. Google now offers consumers Internet connections with speed up to a billion bits per second via fiber-optic cables. The first installation of the fiber-optic infrastructure was in Kansas City, Missouri, and installation was completed neighborhood by neighborhood. Google playfully used the term "fiberhoods" to describe the neighborhoods that were signed up to receive the infrastructure and Internet service.

Hypothetically, assume that Google does a trademark search of the word "fiberhoods" but decides to delay filing a federal trademark application. Instead, Google immediately begins test-marketing sales of its fiber-optic Internet in neighborhoods in and around Kansas City. After six months of better-than-expected sales and customer reviews, Google decides to launch the product nationally and seek federal trademark protection. Unbeknownst to Google, however, a small technology startup company based in Seattle innocently launches a fiber-optic Internet product under the same trademark, but has not registered its mark. As part of its marketing efforts, the small startup technology company advertises in all the major newspapers in Washington State and on local television and radio as well. Due to customer demand, all major electronic distributors in Washington carry the Seattle technology company's product. Under this scenario, even though Google is

the senior party with first use, it is likely that the Seattle company will be able to continue to use the "fiberhood" mark in the limited market of Washington and perhaps in some areas of the surrounding states.[11]

7.6.2 Federal Trademark Protection

Although a trademark owner can simply acquire geographic trademark rights through use of the mark, there are a number of advantages in filing for a federal trademark registration:

- Right to use the ® symbol with all federally registered marks. This symbol can have potent deterrent effects.
- Provides constructive notice to the public of the claim to ownership of the mark. Makes it much more difficult for a party to plead innocent infringement. Also, a basis for the United States Patent and Trademark Office ("USPTO") to reject confusingly similar marks. Common law marks cannot be cited by the USPTO to deny registration.
- Confers nationwide priority of rights effective from the US application filing date. This may be the most important advantage. With this right, unlike with common law, a trademark owner does not have to prove use in a particular state or states(s) in order to claim trademark rights.
- The legal presumption of the registrant's ownership of the mark, its validity, and the registrant's exclusive right to use the mark nationwide. With this right, the trademark owner once again does not have to prove rights in the mark, as they are presumed.
- Ability to bring an action concerning the mark in federal court and possible recovery of treble (i.e., triple) damages and attorney's fees.
- US registration may serve as a basis to obtain registration in foreign countries without first using the mark.
- Ability to file the US registration with the US Customs Service to prevent importation of infringing foreign goods.
- Availability of incontestability status after five (5) years of continuous use and registration.

Although a trademark owner may gain some rights through use of a mark, it is recommended to file a trademark application as soon as possible and early in the development of the product.

[11]At the time of this writing, Google, Inc. has a pending service mark application with the United States Patent and Trademark Office for FIBERHOODS, Serial No. 86,746,043.

The Federal Trademark Application Requirements

The requirements for filing a trademark application are relatively straightforward. In order for an application to receive a filing date, it must include: (1) the required filing fee for at least one class of goods or services; (2) the name of the applicant; (3) the name and address for the applicant or attorney for communication; (4) a clear drawing of mark to be registered; and (5) the identification of the goods and/or services that the mark will be used with.

The most complex part of filing an application is preparing the identification of goods and/or services for which trademark protection is being sought. The goal is to draft identification of goods and services as broadly as possible because the identification cannot later be expanded. The USPTO requires that the identification be specific and definite. Moreover, if use is claimed, it is important that the mark be used on all of the goods or services, and that there be a *bona fid*e intent to use the mark if the application is filed on an intent to use basis. If these requirements are not met, any subsequent registration could be subject to cancelation for fraud on the USPTO.

There are four bases on which to register a mark:

1. Actual use in commerce;
2. *Bona fide* intention to use the mark in commerce;
3. Foreign registration—this is only available to companies domiciled outside the USA; and
4. Under the Madrid Protocol—this is only available to companies domiciled outside the USA.[12]

In order for an applicant to claim use in commerce as the basis for an application, the mark must have been in use as of the application date. The date of first use is the date on which the goods were first sold or transported in interstate commerce or the services first rendered anywhere in the world in an arm's length transaction. The date of first use in commerce is the date that the goods are either sold or transported in commerce such that they could be regulated by applicable laws. For services, the date of first use in commerce is the date the mark is first used or displayed in sales or advertising of services, and the services are rendered in interstate commerce.

Once the trademark owner decides to adopt and use a specific trademark, an intent-to-use application should be filed as soon as possible in order to gain the advantage of a constructive use date. Constructive use refers to the presumption that is afforded by the act of registration that the applicant is treated as though the mark was in use across the country in connection with the registered goods or services identified in the application at the time that the application was made.

[12]Foreign trademark protection is discussed below in this chapter.

Examination

Following the filing of a trademark application, the USPTO assigns it to a trademark-examining attorney who examines the mark to determine whether it is entitled to registration. The trademark-examining attorney conducts a trademark search to determine whether the mark is likely to cause confusion with any other mark on the Principal Register and reviews the application for compliance with the Trademark Act and USPTO Rules.

If for any reason the trademark-examining attorney determines that the mark is not registerable for any reason, the trademark-examining attorney will issue an office action that advises the applicant of all grounds of refusal and all matters that require further action. The applicant has six (6) months to respond to the office action. This six (6)-month period runs from the mailing date of the office action. Failure to fully respond to the office action within the statutory period results in the application becoming abandoned.

Once the applicant has had the opportunity to respond to all issues raised in the office action, the examining attorney issues a final communication that either allows or finally rejects the application. After a negative final office action, the applicant may file a request for reconsideration and submit additional evidence and argument in order to persuade the examining attorney to withdraw the final office action. If the examiner fails to withdraw the final office action within six (6) months, the applicant must either meet every requirement of the office action or appeal to the Trademark Trial and Appeal Board in order to avoid abandonment of the application.

Following examination, if it appears that a mark is entitled to registration on the Principal Register and there are no outstanding requirements or refusals, the examining attorney will approve the mark for publication in the USPTO *Official Gazette*. If a third party does not file an opposition within thirty (30) days of publication or request a time extension to file an opposition, registration of the application will proceed.

For applications based on intent to use and where no Amendment to Allege Use has been filed before publication, the USPTO will issue a Notice of Allowance. The application will proceed to registration upon the filing of a Statement of Use. A Statement of Use or request for extension of time to file a Statement of Use must be filed within six (6) months of the mailing date of the Notice of Allowance. The applicant may request an extension for a six (6)-month period without showing good cause. Thereafter, the applicant may receive an additional six (6)-month extension upon request and by a showing of good cause.

7.6.3 State Registration

State laws also provide for trademark registrations. However, given the many advantages to Federal Registration, there is little point to obtaining a State Registration unless the trademark owner cannot establish use in interstate commerce (i.e., all of the applicants' use of the mark is within a single state), or has a specific legal need to take advantage of that state's trademark or anti-dilution remedies.

7.6.4 International Protection

Trademark protection is also available internationally. Unlike the USA, most countries award trademark rights solely on a first-to-file basis. Therefore, it can be extremely important to consider the need to file a trademark application in other countries. A US Registration can form the basis of an application in a foreign country without the necessity of first having used the mark in that country. In most countries, a US company can file a trademark application that claims the same US application date if the trademark application is filed within six (6) months of the US filing date. However, foreign trademark protection is often very expensive and the costs multiply depending on the jurisdictions in which protection is sought. Accordingly, a company should develop a list of countries for which registration will be sought.

When considering which countries to pursue protection, the following factors should be evaluated.

- Serious consideration should be given to registering in those countries where the mark is used or will be used in the near term.
- Consideration should also be given to countries where the startup company is planning on expanding in the next 3–5 years. This is especially true for large markets such as China, which uses a first-to-file system.
- Finally, if counterfeiting is a problem, consideration should be given to defensive filings in some of the key counterfeiting source nations such as Taiwan, China, and Vietnam.

Once the decision is made, a trademark owner has several options for filing overseas. In many cases, the filing is done in each individual country, which requires hiring a trademark attorney in each country and paying filing fees in each country. However, there are some international treaties that allow a trademark owner to avoid some of these fees and costs.

Madrid Protocol

Using the Madrid Protocol can reduce foreign trademark filing costs. The Madrid Protocol is an international trademark treaty that permits the owner of a "home-country" registration to file an international application with its national trademark office that designates other member countries. The Madrid Protocol offers cost savings and increased efficiency for US trademark holders. The International Trademark Association has aptly summarized the benefits of the Madrid Protocol as offering[13]:

- one application;
- in one place;
- with one set of documents;
- in one language;
- with one fee;
- resulting in one registration;
- with one number;
- and one renewal date;
- covering more than one country.[14]

The cost savings of registration through the Madrid Protocol are significant. Another advantage of the Madrid Protocol is the simplicity in filing application amendments. Without the Madrid Protocol, applications would have to be filed and prosecuted individually in every country in which the mark is registered. However, the Madrid Protocol simplifies this process at a reduced cost.

Other advantages of an International Registration under the Madrid Protocol include having priority of protection in all designated countries from the date of international registration, as opposed to the date of registration in the individual countries. Also, the Madrid Protocol limits the time a national office has to act once

[13]International Trademark Association, The Madrid Protocol: Impact of US Adherence on Trademark Law and Practice, at p. 1 (Revised April 2003).

[14]The member countries to the Madrid Protocol include: African Intellectual Property Organization, Albania, Algeria, Antigua and Barbuda, Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Belgium, Bhutan, Bosnia and Herzegovina, Botswana, Bulgaria, Cambodia, China, Columbia, Croatia, Cuba, Cyprus, Czech Republic, Democratic People's Republic of Korea, Denmark, Egypt, Estonia, European Union, Finland, France, Gambia, Georgia, Germany, Ghana, Greece, Hungary, Iceland, India, Iran, Ireland, Israel, Italy, Japan, Kazakhstan, Kenya, Kyrgyzstan, Lao People's Democratic Republic, Latvia, Lesotho, Liberia, Liechtenstein, Lithuania, Luxembourg, Madagascar, Mexico, Monaco, Mongolia, Montenegro, Morocco, Mozambique, Namibia, Netherlands, New Zealand, Norway, Oman, Philippines, Poland, Portugal, Republic of Korea, Republic of Moldova, Romania, Russian Federation, Rwanda, San Marino, San Tome and Principe, Serbia, Sierra Leone, Singapore, Slovakia, Slovenia, Spain, Sudan, Swaziland, Sweden, Switzerland, Syrian Arab Republic, Tajikistan, The former Yugoslav Republic of Macedonia, Tunisia, Turkey, Turkmenistan, Ukraine, UK, USA, Uzbekistan, Viet Nam, Zambia, and Zimbabwe.

it receives a request for the extension of a Madrid registration. If the office does not act to oppose protection during the allotted time, the registration is automatically granted.

By offering simultaneous registrations in the USA and foreign countries, the Madrid Protocol also reduces trademark piracy. Without the Madrid Protocol, individuals in foreign countries are often free to register a US company's trademark, and attempt to sell the mark to the US company at highly inflated prices. Registration under the Madrid Protocol reduces such piracy since all designated countries are given the same priority date.

Notwithstanding the cost savings and increased efficiency associated with the Madrid Protocol, there are some drawbacks for US applicants. First, the Madrid Protocol requires that the scope of goods or services covered by the registration be limited to the home country's registration rules. US applicants that seek registration through the Madrid Protocol will be prejudiced in this respect since the USPTO requires more detailed identification of goods and services than most other countries. Unlike some other countries, the USPTO will not accept registration of marks for broad classes of goods and services. Other countries, such as Egypt, allow for registration of a mark for a whole class of goods or services (*i.e.*, clothing generally), without specifying a good or service within the class (i.e., t-shirts specifically). Therefore, US companies may limit the scope of protection that could otherwise be obtained in other countries by filing an International Registration as opposed to filing individual national applications.

Another potential consequence of the Madrid Protocol for US trademark owners is the limitation that the USPTO imposes on applicants to provide a Statement of Use or *bona fide* intent to use the mark in commerce before obtaining a filing date, and proof of use in commerce before a registration will issue. Most other countries do not require a similar Statement of Use or intent to use the mark in commerce, or proof of such use. Therefore, US trademark applicants may be disadvantaged by their inability to "reserve" a trademark under USPTO procedure.

Trademark owners filing under the Madrid Protocol are also subject to "central attack." If a home-country application or registration is canceled or abandoned during the first five (5) years of registration, whether completely or partially, the home country must notify World Intellectual Property Organization (WIPO). The International Registration then lapses with respect to all designated countries. This is particularly disadvantageous to US trademark owners because there are usually more grounds for challenging registrations under US law than in other countries.

The Madrid Protocol provides for a partial safeguard against "central attack" by providing a three (3)-month grace period for the owner of a canceled registration to file national applications in designated countries that enjoy the same priority as the International Registration. This process, however, can be costly and time consuming.

Unlike national application systems, under the Madrid Protocol an assignment may only be recorded if the assignee is itself qualified to file a Madrid Protocol application. Although this only effects the recordation of the assignment and national laws will govern the legal effect of the assignment, member countries such as the USA have passed laws which make assignments to non-member citizens

invalid. This assignment provision may be problematic in cases where a US citizen or corporation wishes to assign registration(s) to a non-member citizen or corporation for tax or other purposes.

The final drawback of implementation of the Madrid Protocol for US trademark owners is that the system is outside of the USA and the procedures can seem unfair for those used to US filings. For example, the time period for responding to office actions under the Madrid Protocol may be quite short due to the fact that an office action is sent from the national office to WIPO and WIPO sends it to the trademark owner. Moreover, many Madrid Protocol countries do not send a Registration Certificate or other notice once the registration issued. Therefore, the trademark owner is left in the uncertain position of not knowing for sure if the registration has actually issued.

European Community Trademark

The European Community system offers a trademark system that allows for registration of a trademark in all of the member countries for one application filing fee.[15] If the trademark owner intends to use the mark in more than two (2) European Community member countries, it is typically more cost-effective to file for a Community Registration. Although a Community Registration can be canceled for five (5) years of nonuse, use in one country is enough to satisfy the use requirement.

7.7 Maintaining Trademark Rights

Trademark rights can be a startup company's most valuable asset, especially early on in the development of the company. Like any asset, these rights need to be maintained. Trademark rights are lost when the mark no longer acts as an identifier of the goods or services. This can occur through abandonment from nonuse or through a course of conduct including acts of commission or omission, which allow a mark to become the generic name of goods or services or lose significance as a mark.

7.7.1 Maintaining Federal Registration

Section 8 of the Lanham Act requires that an affidavit or declaration verifying continued use in commerce or excusable nonuse due to special circumstances be filed with the USPTO between the fifth and sixth anniversary and or between the

[15]Member countries include: Austria, Benelux (Belgium, the Netherlands and Luxembourg), Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK.

ninth and tenth anniversary date of the registration. This requirement applies to all registrations. Failure to meet this requirement will result in cancelation of a registration.

The duration of a trademark registration has varied over the years. Since November 16, 1989, however, all registrations that have been issued or renewed after that date have only a ten (10)-year term. Therefore, in order to maintain a federal trademark registration, a renewal application must be filed on or between the ninth and tenth anniversary date of the registration.

7.7.2 Licensing Trademarks

A trademark owner can license its trademark to a third party. However, a trademark owner must reserve the power to exercise quality control over the nature and quantity of the goods and services in a license. If the trademark owner fails to exercise such quality control, the license is considered a "naked license" and the mark may be abandoned.

7.7.3 Assignment of Trademarks

A trademark may only be assigned to another party with the goodwill of the business in which the mark is used. Failure to meet this requirement can result in trademark becoming void. Similarly, intent-to-use applications cannot be assigned prior to the filing of a Statement of Use or Amendment to Allege Use unless the assignment is to the successor to the ongoing and existing business of the applicant or to the portion to which the mark pertains.

7.7.4 Policing Trademark Use

The following tips can help a startup protect the value of a trademark.

- Do not trademark the name of your product. If you cannot provide a generic name of your product without referring to your brand, then the trademark may become generic.
- When using a trademark in a sentence, always use the trademark as an adjective. If this rule is not followed, the public may come to see the trademark as the generic name of the product or service, which is what happened to former trademarks such as escalator, cellophane, and kerosene. Use of the word "brand" also can help emphasize that a term is a mark and not a generic descriptor, for

example: Loctite®[16] brand adhesive products. There is one caveat to this rule—many companies use their trade names as trademarks. In those instances where the trade name is being used, it is a proper noun, not an adjective. For example, one of Ford's marketing slogans incorporates its trade name into the slogan as a proper noun: "Have you driven a Ford lately?[17]"

- In a sentence, the trademark should be set apart from the text in some fashion. This can be accomplished by using ALL CAPITAL LETTERS; **bold face type**; Initial Capital Letter; *italics*; or through the use of a unique font.
- Monitor Use of Your Mark. If you see your mark starting to appear in all lower cases in publications, this is a danger sign. Steps should be taken to send notifications to advertisers using the mark in that way.
- Police Misuse. If your trademark is found in a dictionary, whether intentional or unintentional, it is strong evidence that the trademark is generic. Corrective action in the form of a letter to the publisher should be taken immediately. Likewise, if you see your mark appear in lower case letters, this is a danger sign.
- Use the brand in a consistent manner. Not only is recognition of the mark enhanced through consistent use, inconsistent use may confuse consumers, dilute the distinctiveness of the mark, and lead to abandonment of the mark.
- Use the appropriate trademark designation. In the USA the symbol TM can be used to identify an unregistered trademark, SM can be used to identify an unregistered service mark, and ® can be used to identify a registered trademark or service mark. Many foreign countries use similar terms. Local laws should be consulted because many countries require proper use of the symbol in their country in order to collect damages for infringement. Such symbols may not be the same as those accepted in the USA.
- Develop a trademark usage manual. All companies, startup or otherwise, should have a manual to advise employees and others on the proper use of the company's trademarks.
- Nonuse. A trademark owner must use the mark to maintain it. Three (3) years of nonuse results in a presumption of abandonment.
- Infringement. The key function of a trademark is as a source identifier. If the same or similar trademark is used by more than one (1) company on the same or related goods, the mark may cease to be a source identifier. Therefore, it is important for a company to police third-party usage of its marks and take appropriate action ranging from cease and desist letters to legal action.

7.7.4.1 Genericide

There are many examples where once valuable trademarks have become generic (i.e., the trademarks have ceased to function as a source indicator and have become

[16]US Registration No. 2,817,934. Owner: Henkel Loctite Corporation.

[17]US Registration No. 0,074,530. Owner: Ford Motor Company.

the name of a particular type of a product). The following terms were at one time a company's trademark:

- ALE HOUSE (for restaurant and bar services)[18]
- ASPIRIN (for acetyl salicylic acid pain reliever)[19]
- CELLOPHANE (for transparent cellulose sheets and films)[20]
- COLA (for soft drink)[21]
- CRAB HOUSE (for seafood restaurant)[22]
- CUBE STEAK (for steaks)[23]
- DRY ICE (for the solid form of carbon dioxide)[24]
- ESCALATOR (for moving stairs)[25]
- FONTINA (for cheese)[26]
- HOAGIE (for a sandwich)[27]
- HONEY BROWN (for a brown ale made with honey)[28]
- JUJUBES (for gum candy)[29]
- LIGHT BEER (for beer with fewer calories)[30]
- MONTESSORI (for educational services)[31]
- MURPHY BED (for folding bed)[32]
- SOFTCHEWS (for chewable medical pills)[33]
- SUPER GLUE (for glue)[34]
- SURGICENTER (for surgical center)[35]
- TOUCH TONE (for phones)[36]

[18]Ale House Management, Inc. v. Raleigh Ale House, Inc., 205 F.3d 137 (4th Cir. 2000).

[19]Bayer Co. v. United Drug Co., 272 F. 505 (S.D.N.Y. 1921).

[20]DuPont Cellophane Co., Inc. v. Waxed Products Co., Inc., 85 F.2d 75 (2d Cir. 1936).

[21]Dixi-Cola Laboratories v. Coca-Cola Co., 117 F.2d 352 (4th Cir. 1941).

[22]Hunt Masters, Inc. v. Landry's Seafood Rest., Inc., 240 F.3d 251 (4th Cir. 2001).

[23]Spang v. Marzall, 104 F. Supp. 126 (D.D.C. 1952).

[24]Dryice Corp. of Am. v. Louisiana Dry Ice Corp., 54 F.2d 882 (5th Cir. 1932).

[25]Haughton Elevator Co. v. Seeberger, 85 USPQ 80 (Comm'r. Pat. 1950).

[26]In re Cooperativa Produttori Latte E Fontina Valle D'Acosta, 230 USPQ 131 (TTAB 1986).

[27]Raizk v. Southland Corp., 121 Ariz. 497, 499 (Ariz. Ct. App. 1978).

[28]Genesee Brewing v. Stroh Brewing, 124 F.3d 137 (2d Cir. 1997).

[29]Henry Heide, Inc. v. George Ziegler Co., 354 F.2d 574 (7th Cir. 1965).

[30]Miller Brewing Co. v. G. Heileman Brewing Co., Inc., 561 F. 2d 75, 79-81 (7th Cir. 1977).

[31]American Montessori Society, Inc. v. Association Montessori Internationale, 155 U.S.P.Q. 591 (1967).

[32]Murphy Door Bed Co., Inc. v. Interior Sleep Systems, Inc., 874 F.2d 95, 101 (2d Cir. 1989).

[33]Novartis Consumer Health, Inc. v. McNeil-PPC, Inc., 1999 US Dist. LEXIS 20981 (D.N. J. 1999).

[34]Loctite Corp. v. National Starch & Chem. Co., 516 F.Supp. 190 (S.D.N.Y. 1981).

[35]Surgicenters of America, Inc. v. Medical Dental Surgeries, Co., 601 F.2d 1011 (9th Cir. 1979).

[36]US Registration No. 0,737,312. Owner: AT&T Co. Canceled March 13, 1984.

- TRAMPOLINE (for jumping and gymnastic equipment)[37]
- ZIP CODE (for mailing designations)[38]

These terms are now generic and available for use by all. If a trademark owner wishes to avoid that result, it is essential that all those associated with a trademark understand the requirements for maintaining trademark protection and distinctiveness.

[37]Nissen Trampoline Co. v. American Trampoline Co., 193 F. Supp. 745 (S.D. Iowa 1961).

[38]US Registration No. 1,042,499. Owner: United States Postal Service. Expired: April 7, 1997.

Chapter 8
Domain Names

Abstract In today's Web-driven world, companies need to have a domain name in order to conduct business online. A company's Web site can promote the company's corporate identity and can serve as a form of branding. A startup can register a domain name with a registrar on a first come, first served basis, and registrars are not responsible for determining whether a domain name registrant has the right to obtain a domain name. This is why it is important for startups to obtain trademark protection on their company name if the company name will serve as the basis for the company's domain name. Trademark protection on the company name will translate to protection of the mark if it is used in a domain name as well. When another entity uses a trademark in a domain name where the trademark rights to the mark are rightly held by another, the trademark owner can initiate a domain name dispute and could have the domain name transferred to the entity that holds the trademark right to the mark used in the domain name.

8.1 Securing Intellectual Property in Domain Names

Domain names are essential to promoting corporate identity and product awareness in the modern era and should be regarded like any other valuable company asset. A domain name is a string of unique characters used as an address to identify a particular computer or server on the Internet. For example, *epa.gov* is used to identify the United States Environmental Protection Agency Web site, *uspto.gov* is used to identify the United States Patent and Trademark Office Web site, and *uber.com* is used to identify the Uber company login Web site.

Domain names consist of a number of domain levels. For example, in a two-level domain name such as *epa.gov*, the portion of the domain name to the right of the period (i.e., "gov") is the top-level domain (TLD), and the portion of the domain name to the left of the period (i.e., "epa") is the second-level domain (SLD). Many Internet users also recognize the three-letter string "www." preceding the domain name. This portion of the domain is typically considered a "subdomain" which is selected by the host computer. The second-level domain is usually selected

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by the user and is typically used as a source identifier in the domain name. The second-level domain can consist of a trademark or service mark. The most common top-level domains are termed global or generic TLDs (gTLDs). The most recognized gTLDs are identified below:

- *.com*—commercial enterprises
- *.net*—networks
- *.org*—nonprofit organizations
- *.biz*—businesses
- *.edu*—educational institutions
- *.gov*—US government entities
- *.mil*—US military
- *.int*—international organizations.

In order to secure a domain name, it must first be registered with an Internet Corporation for Assigned Names and Numbers (ICANN)-accredited registrar. ICANN is responsible for the global coordination of the Internet's system of unique identifiers, including domain names. There are over one hundred and fifty (150) registrars accredited by ICANN, which can be found at *icann.org/registrar-reports/accreditation-qualified-list.html*. Accredited registrars and domain name holders must implement and follow ICANN's Uniform Domain Name Dispute Resolution Policy (UDRP). Domain names are typically granted by registrars on a first come, first served basis. Registrars are not responsible for determining whether a domain name registrant has the right to obtain a domain name. For example, if the registered domain name incorporates a trademark owned by another, the domain name registrant could be liable for trademark infringement. Therefore, it is highly important that registrants conduct a clearance search prior to adopting or using a domain name.

Registering a domain name with a registrar does not grant trademark protection for the domain. In order to seek trademark protection for a domain name, the owner must file an application with the US Patent and Trademark Office. In order to obtain a federal trademark registration for a domain name, the applicant must satisfy all of the legal requirements for registrable trademarks. In addition, the US Patent and Trademark Office (USPTO) requires specific procedures for applications to register domain names. In registering a domain name as a trademark, the top-level domain (e.g., .gov and .com) and subdomain (e.g., www.) are usually ignored. The USPTO typically considers only the second-level domain (SLD) when examining the mark for likelihood of confusion with other marks. Where the domain name is used only as an Internet address and is not used to identify the source of goods or services, the trademark is not registrable. However, if the SLD is an actual trade name for a product or the domain name owner uses the domain name to advertise its goods or services, the US Patent and Trademark Office is more likely to find the trademark registrable.

Example Using a company's trademark as a domain name can be a very powerful business tool. For example, the Sony Corporation uses its registered trademark Sony® as a domain name to help customers identify and easily remember its Web address www.sony.com. Sony already owns the trademark rights to the Sony® mark, and the domain name identifies the source of the goods, which it sells on its site. Conversely, a domain name that incorporates generic terms cannot seek trademark protection, because the generic terms would not be registerable solely as a trademark.

Domain names used to advertise a good or service can be used to obtain trademark protection. Hypothetically, if Sony launched a new PlayStation videogame console, the PlayStationV, Sony could register the domain name www.playstationV.com and it is likely that the domain name would also be considered registrable by the USPTO as a trademark, so long as the mark satisfied the remaining requirements for trademark applications since it uses the actual name for Sony's underlying new videogame console product.

8.2 Domain Name Disputes

Domain name disputes can arise in a number of ways. For example, use of another's trademark in a domain name can be subject to an action for trademark infringement, unfair competition, or dilution of a trademark. "Cybersquatting" is another type of act that has been subject to dispute. Cybersquatting is typically considered the act of registering a domain for the purpose of preventing a trademark owner from using it in order to extract payment from the trademark owner. In addition to holding the domain name hostage to the trademark owner, cybersquatting also includes situations in which domain name registrants have registered domain names that incorporate trademarks with the intent to benefit (e.g., by way of advertisements) from inadvertent traffic at the registrant's Web site.

In order to address cybersquatting, Congress enacted the Anticybersquatting Consumer Protection Act (ACPA).[1] The ACPA identifies cybersquatting as follows:

> (A) A person shall be liable in a civil action by the owner of a mark, including a personal name which is protected as a mark under this section, if, without regard to the goods or services of the parties, that person—
>
> (i) has a bad faith intent to profit from that mark, including a personal name which is protected as a mark under this section; and
> (ii) registers, traffics in, or uses a domain name that—

[1] 15 USC § 1125.

(I) in the case of a mark that is distinctive at the time of registration of the domain name, is identical or confusingly similar to that mark;
(II) in the case of a famous mark that is famous at the time of registration of the domain name, is identical or confusingly similar to or dilutive of that mark; or
(III) is a trademark, word, or name protected by reason of section 706 of title 18, United States Code, or section 220506 of title 36, United States Code.[2]

Thus, in order for a trademark owner to bring a claim under the ACPA, the owner must establish that:

(1) The mark is distinctive or famous;
(2) The domain name registrant acted in bad faith by use of the mark; and
(3) The domain name and the trademark are either identical or confusingly similar.

Around the same time that the ACPA was enacted in the USA, ICANN developed the Uniform Domain Name Dispute Resolution Policy (UDRP) to similarly address domain name abuse that impacts trademarks owners worldwide. The goal of the UDRP is to create a lower cost administrative process for the resolution of domain name disputes. In a UDRP proceeding, the trademark owner must prove the following three elements:

(1) That the domain name at issue is identical or confusingly similar to a trademark in which the complainant has rights;
(2) That the domain name registrant has no rights to, or a legitimate interest with respect to, the domain name; and
(3) That the domain name has been registered and is being used in bad faith.

While a UDRP proceeding is beneficial in that, it can result in a speedy and lower cost disposition of a domain dispute, and the only available remedies in a UDRP proceeding are the cancelation or transfer of the disputed domain name. As discussed above, whenever a registrant signs an agreement for registration of a generic or global TLD (e.g., .com, .net, and .org), the registrant must agree to resolve any disputes with third parties regarding the domain name under the UDRP process.

8.3 Case Study: Domain Dispute Between Startup Codecademy and Code Academy

In 2012, there were two up-and-coming startup companies: Codecademy and Code Academy. Both startups' primary business objective was to teach people how to program computer code and how to perform Web site development.

Codecademy's business platform is an online learning tool that users can access from their homes and complete at their own learning speed. Codecademy registered

[2] 15 USC § 1125(d)(1)(a).

the domain name containing its company name—codecademy.com—in August 2011, and hundreds of thousands of users visited and used the Web site. Codecademy also acquired the rights to the domain name codeacademy.com in October 2011 and used the domain name of codeacademy.com to redirect Internet traffic to its company Web site, codecademy.com. It is important to note that when someone pronounces "Codecademy," it sounds like "Code Cademy," and when said quickly, one might hear "Code Academy."

Code Academy offered an in-class room educational experience where students could come and learn about various aspects of computer programming. Code Academy maintained the domain name codeacademy.org, where students could apply to the educational program and view course offerings.

In late 2011 and into 2012, both Codecademy and Code Academy received much deserved media attention, and people began talking about the two companies. But in light of their very similar names and domain addresses, people began to express confusion regarding the two companies. The confusion was largely due to two main issues:

(1) People often assume that a company holds the .com domain name associated with their company name and
(2) The pronunciation of "Codecademy" is very similar to "Code Academy."

In 2012, Code Academy filed a domain name dispute[3] against Codecademy with the World Intellectual Property Organization (WIPO). Code Academy asserted that it held service mark rights in the CODE ACADEMY mark, and since the domain name codeacademy.com is identical to the CODE ACADEMY mark, Code Academy also has rights to the domain name. Code Academy sought to have the domain name transferred to itself from Codecademy, since Codecademy's use of the mark in the domain name codeacademy.com was confusing and was in bad faith.

Codecademy countered by contending that the mark CODE ACADEMY is merely descriptive of the services provided by Code Academy and thus cannot be a registerable trademark, without acquiring secondary meaning, and that Code Academy had not acquired secondary meaning in the mark CODE ACADEMY. Codecademy also argued that while Code Academy had applied for trademark protection with the USPTO for the mark CODE ACADEMY, at the time that Codecademy registered the domain name codeacademy.com, Code Academy had not yet obtained trademark rights to the mark CODE ACADEMY, and thus Codecademy's registration and use of the domain name codeacademy.com was not in bad faith.

The WIPO administrative panel ultimately decided that Code Academy held no rights to the mark CODE ACADEMY, and thus Code Academy's request that the domain name codeacademy.com held by Codecademy be transferred to Code Academy was denied.

[3]The WIPO Arbitration and Mediation Center Administrative Panel Decision concerning Code Academy LLC v. Ryzac, Inc. d/b/a Codecademy, Case No. D2012-0857 can be found online at http://www.wipo.int/amc/en/domains/search/text.jsp?case=D2012-0857.

8.4 New Top-Level Domains

Since the inception of the Internet, new generic Top-Level Domain Names (gTLDs) have been introduced for use. In 2012, ICANN conducted an initiative designed to expand the Internet's Domain Name System. The initiative is called the "New gTLD Program," and ICANN has accepted thousands of applications, submitted by various companies, for new gTLDs for Internet addresses (the old, familiar gTLDs being the .com, .gov, and .edu, suffix attached to the end of a domain name).

Hundreds of new gTLDs have been introduced, including .baby, .mail, .search, .tickets, and .wedding. Internet-based companies, such as Google or Amazon, applied for hundreds of gTLDs, and licensing companies bought many others. Some companies purchased their own name as a gTLD, including Toshiba, Samsung, Microsoft, Panasonic, and Verisign. A number of licensing companies also bid on new top-level domains.

The process for obtaining a new gTLD was limited to a three-month window of opportunity to apply spanning from January 12, 2012 to April 12, 2012. The process included filing an application for the choice gTLD and paying an application fee of $185,000 per submission. As a result of the application process, duplicates of certain gTLDs were inevitable, i.e., five companies applied for the gTLD .style and four companies applied for the gTLD .radio. The application process also poses the potential problem of proper ownership of the gTLD. It is possible that an applied-for gTLD is identical to, or confusingly similar to, an existing trademark owned by another. Granting the gTLD to someone other than the trademark owner would infringe the legal rights of the trademark owner.

To resolve these issues, ICANN initiated a public review process for all of the applied-for gTLDs. Applications are evaluated in batches. Once the application is selected for evaluation, the public has a 60-day window to make any comments and a 7-month window to make any formal objections to the applied-for gTLD. Formal objections are limited to:

- "String" confusion objections, which involve the issue of duplicate applied-for gTLDs or those applied-for gTLDs that are confusingly similar to another applied-for gTLD;
- Legal rights objections, i.e., a trademark owner (other than the applicant) has legal rights to the mark being used as a gTLD;
- Public interest objections; and
- Objections based on the interests of particular communities.

After the ownership disputes of the new gTLDs have been settled, ICANN plans to release the new domains in batches. Those companies who are granted the new gTLD names will have to pay an annual $25,000 maintenance fee to keep the rights to the domain names.

A sampling of the new Internet addresses look like this:

- https://abc.xyz—for Google's Alphabet online home page.
- fatbeard.vegas—a Las Vegas-based advertising company.
- www.lifetothefullest.abbott—a marketing campaign for Abbott, a pharmaceutical company.
- www.generalmotors.green—a General Motors Web site dedicated to green initiatives and information.

8.5 New Top-Level Domains and Startups

Startups are prime candidates for using the new top-level domain names. The companies that applied for and were awarded the new top-level domain names by ICANN during the New gTLD Program spent a lot of money to bring the new gTLD names into existence, and now they own the rights to who can license the top-level domain from them. Many companies are looking to make a return on their investment, especially the licensing companies that hold many of the new gTLDs. These new gTLD names are an opportunity that startups are well positioned to capitalize upon.

- **The new gTLD names are more affordable than premium .com names**. Startups can obtain licensing rights to use these new gTLDs for a reasonable price compared to premium .com domain names.
- **The new gTLD names are cutting edge, which many startups are drawn to**. Most startups derive a lot of energy and momentum from the fact that their business or product is new and innovative, cutting edge, or unprecedented in the marketplace. By being an early adopter of the new gTLDs, a startup can demonstrate to customers and prospective customers that it is a trend setter, committed to providing customers with the newest innovations that the industry has to offer.
- **Many of the new gTLDs are readily available**. Since the new gTLDs have only recently been released, there is plenty of availability when it comes to these domains, and the possibilities are nearly endless.
- **The new gTLDs can be used to customize a startup's web address to reflect the business**. The new gTLDs are very versatile, and there are so many of them that it is easy to create a domain name for your startup that really identifies your business.
- **The new gTLDs can hone in on a specific product, brand, or location**. The new gTLDs provide startups with flexibility and enable them to really hone in on a specific aspect of their business through the use of microsites. A domain name that follows the model of http://product.brand can be useful in communicating to customers both a company's product and brand, while a domain

name that follows the model of companyname.location can communicate that the startup is a local business.

- **The new gTLDs allow for shorter, easier to remember domains**. The new gTLDs can convey in fewer characters important information about a startup and its business. Customers remember shorter company names and Web sites more quickly than complex or long names.

Chapter 9
Patents

Abstract Patents can be a key advantage for a startup, during a critical phase in a startup's growth curve. If the right patent protection can be obtained, it can keep your competitors out of the market space, while you develop and solidify your brand. A patent may be granted for the invention of any new and useful process, machine, manufacture, or composition of matter or any new useful improvement thereof. A patent is a bundle of property rights that grants the inventor the right to exclude others from making, using, or selling the invention as defined by the patent's claims in the USA for a limited period of time.

9.1 Patent Protection as an Intellectual Property Strategy for Startups

> Congress shall have power … To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.
>
> United States Constitution, Article I, Section 8.

A US Patent is a contract between the USA and the inventor(s) in which the owner is granted a limited monopoly to exclude others from making, using, selling, offering for sale, or importing a patented invention into the USA during the term of the patent. In exchange for these exclusive rights, the inventor is required to disclose the full and complete details of the invention to the public. The theory behind the patent system is that if the public has access to complete inventive disclosures, it will develop new and better ways of solving the same problems.

The patent monopoly has some limitations. A patent does not give an owner the right to make, use, or sell an invention. For example, a patent owner can be prevented from selling its patented invention if a competitor's earlier patent covers some part of the patented invention. Further, a US Patent is only valid within the USA; it is not enforceable outside the USA since each country offers its own patent protections within its borders.

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The patent right to exclude others from making, using, selling, offering for sale, or importing the patented invention creates barriers for competitors from entering the market. Such barriers can either keep competitors out of the market, or may be a source of revenue to a company that is willing to license its patents.

Patent licenses can take many different forms, and a patent owner can license all, or only a portion of the patent rights. For example, a company can grant a license to a first company to sell a patented invention in one specific market, while granting a second license to a second company to sell the patented invention in another, separate market. Developing a strong portfolio of patent rights (i.e., barriers to entry) can be attractive to investors or may create new business opportunities by reducing the risk of competition.

Example Apple holds patents on much of the technology incorporated inside of its iPad and iPhone products. However, the centerpiece for each of these devices lies in the core processor. For many years, Apple has licensed the technology for the core processor chip from ARM Holdings. ARM is an IP holding company that focuses on semiconductor technology. The chip that is used in iPad 2 and the iPhone 4S is based on ARM's dual-core ARM Cortex-A9 MPCore central processing unit and a dual-core PowerVR SGX543MP2 graphics processing unit.

While Apple has the right to exclude others from making, using, selling, offering for sale, or importing iPads and iPhones within the scope of Apple's patent rights, Apple in turn needs a license from ARM to use ARM's processors in Apple products. If Apple were to obtain the core processor from another source for use in new models of the iPad or iPhone, Apple will want assurances from its vender that the new processors are covered by an appropriate license.

A startup company can use patents either offensively (i.e., to keep others out of the marketplace), or defensively (i.e., as a counterthreat to a competitor's threatened patent infringement lawsuit). Patents can also be a valuable corporate asset and may be monetized in a number of ways, some of which are discussed in other chapters of this book, such as Chaps. 16 and 17.

9.2 Patentability Requirements in the USA

In order for something to be patentable, it must be the following:

(1) patentable subject matter;
(2) useful;
(3) novel; and
(4) non-obvious.

9.2.1 Patentable Subject Matter

Pursuant to the patent statute, "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title."[1]

- A "process" is a way to produce a result. For example, a process may consist of mixing certain ceramic elements at a particular pressure and temperature to create a new ceramic composite. Not all processes are patentable. For example, a pure mathematical algorithm is not patentable. However, a mathematical algorithm included in a process used to determine a useful, concrete, and tangible result will in most circumstances be considered patentable subject matter.
- A "machine" is a device with assembled parts that move to perform a desired operation.
- A "manufacture" or "article of manufacture" is typically regarded as a man-made, tangible object that is not naturally occurring.
- A "composition of matter" is any compound, substance, mixture, etc, that is the result of combining two or more ingredients.

Based on the above definitions, it is no surprise that patentable subject matter has been said to "include anything under the sun that is made by man."[2] Although there have been many software, patent cases that have thrust patents into the limelight, software, including computer programs, apps, and Internet-related inventions are patentable. There are, however, some recognized exceptions including:

(1) laws of nature,
(2) natural phenomena, and
(3) abstract ideas.

Inventions may often encompass more than one category of patentable subject matter. Accordingly, patents will often have more than one type of claim.

Example Consider the following hypothetical situation. During product testing of a new battery, a senior engineer discovered that if an impurity were introduced into the chemical cells of the battery during manufacture process of the battery, the battery would operate at a cooler temperature, thus reducing the risk of the battery reaching interrupt temperature and improving the battery life. The engineer decides to patent the invention.

In this example, the engineer may pursue patent protection for both the battery and the method of making the battery. A patent with product claims may give the inventor broader protection because the claims would give the

[1] 35 USC § 101.

[2] Diamond v. Chakrabarty, 447 US 303 (1980).

inventor the right to exclude competitors from making the product regardless of any method they use to make the product. Method claims are often desirable because even if the specific product claims are not held to be novel, the method of making the product may still be novel.

9.2.2 Invention Has Utility

A patent application must also demonstrate that the claimed invention is "useful" for some purpose to meet the utility requirement. In most technical fields, this utility requirement has a low threshold easily satisfied by demonstrating any useful result. For a patented invention to fail to satisfy the utility requirement, it must be "totally incapable of achieving a useful result," which is rare in applications for software, processes, machines, and articles of manufacture.

While rare in those instances, failure to satisfy the utility requirement is more common in biotechnology and chemical applications. In the biotechnology and chemical fields, the USPTO typically requires that applications disclose a practical or real-world benefit available from the invention—in other words, a specific, substantial, and credible utility. Specific utility requires that the applicant has knowledge of what the invention does. Credible utility requires that the claimed invention be believable based on the current state of the art. Finally, substantial utility requires that the claimed invention have a real-world benefit (e.g., a treatment for a disease). In the chemical field, claims may be rejected for lack of utility if a compound or reaction creates a reasonable doubt as to whether there is a credible utility.

9.2.3 Invention Is Novel

In order for an invention to be patentable, it must be new or "novel" (i.e., not in the prior art) . If the prior art shows every element of a claim, the claim is unpatentable as "anticipated" by the prior art. In the USA, prior art is "everything" in the public domain that existed before the filing date of a patent application. In order for a patented invention to be rejected over a prior art reference, the reference must have been public somewhere in the world. Secret or non-public materials cannot act as prior art. Rules regarding prior art differ around the world. For most foreign countries, prior art is "everything" prior to the priority filing date of a patent application (i.e., most countries do not recognize a "one-year" grace period).

The AIA Prior Invention—35 USC § 102(a)(1) and § 102(a)(2)

Under § 102(a)(1), if an invention was known, used, on sale, or was disclosed in a printed publication anywhere in the world before the effective filing date of invention, it is not patentable. This section of the America Invents Act (AIA) expands prior art to include uses and sales anywhere in the world, not just in the USA. However, there are a few exceptions regarding disclosures to the public, which are codified in § 102(b). Section 102(a)(1) also considers prior art to be public use, on sale, or "otherwise available to the public before the effective filing date of the claimed invention." For example, displaying a product at a trade show anywhere in the world is likely to be considered a use that bars patentability.

Example A designer presents a new touch screen smartphone product with fingerprint scanning capability at a technology convention on June 1, 2015, and the designer decides to file a patent application on August 1, 2015. But, another person published an article disclosing the same product on July 1, 2015. During the examination of the designer's patent application, a USPTO patent examiner could rely on the publication as anticipating the designer's patent application claims.

In order to overcome the anticipatory effect of the publication, the designer can submit evidence establishing his public disclosure, which predated the publication (i.e., the convention presentation of the product to the public on June 1, 2015).

Prior to the enactment of the AIA on March 15, 2013, the USA was a first-to-invent patent system, meaning that if an inventor could prove that he was the first person to invent an invention, he would be entitled to patent protection. Section 102(a)(2) of the AIA, in essence, switched the US patent application system from a "first-to-invent" to a "first-to-file" regime by indicating that a patent is not available if there is an earlier-filed application describing the claimed invention that "names another inventor."

Statutory Bars—35 USC § 102 (b)

Under the AIA, § 102(b) offers several exceptions to § 102(a). Any public disclosure, use, offer for sale, or sale of the invention, made by the inventor, joint inventor, or another who obtained the subject matter of the invention directly or indirectly from the inventor is not considered prior art under this section so long as the disclosure is within one (1) year of the effective filing date of the patent application. Public disclosure of an incomplete invention may not rise to a statutory bar.

Under the AIA, the inventor's own actions will not result in a § 102(b) statutory bar so long as an application is filed within one (1) year of the inventor's act of disclosure. For example, an inventor's public disclosure of the invention at a trade

show or offer to sell the invention to anyone is a permissible public disclosure only if an application is filed within a year of that public disclosure. More than one (1) year prior to the application filing date can be a statutory bar. An exception to the public use statutory bar is if the invention is being publicly used for bona fide testing or evaluation.

Example Assume that two inventors, Startup Steve and Startup Stu equally contribute to making a new LED light bulb that can be controlled through a smartphone app. Startup Steve is interested in publishing a press release for the startup's Web-based blog to disclose their new breakthrough bulb and app. If the two inventors intend to pursue patent protection for their invention, Startup Steve should wait until after the patent application is filed to publish his press release. If Startup Steve publishes his press release prior to the date the application is filed, however, the two inventors will have one year from the first date of the publication to file a US patent application on the bulb and smartphone app. By publishing the release prior to the application's filing date, the inventors may be prohibited from filing foreign patent applications later down the road.

Example During the research and development phase of the smartphone touch screen design, a startup company wants to test the sensitivity of the touch screen to pressure and touch to determine whether adjustments need to be made. In doing so, the company goes to the local high school and allows students to test the product under the condition that the students agree to complete an evaluation related to the product.

After the product testing is complete and the company makes a determination that the product's sensitivity range is acceptable, the startup company also makes a competitor's product available to the students at the high school for a one-day-only "demo" in order to evaluate their preference between the company's product and the competitor's product. One year and one day after this preference testing, the company files a patent application for the product.

In the above example, the company will likely be able to argue that the sensitivity testing is not a statutory bar because it was conducted for bona fide experimental purposes in order to determine whether the touch screen's sensitivity range is acceptable. In contrast, the "preference-testing" evaluation will likely create a statutory bar that prevents patentability of the product because evaluating consumer preference is typically not considered an experimental purpose.

The following chart summarizes the types of materials and acts considered "prior art":

WHAT	WHO	WHERE	WHEN
The invention is publicly known	By another	Anywhere	Before the applicant's effective filing date
The invention is publicly used	By another	Anywhere	Before the applicant's effective filing date
The invention is described in a patent	By another	Anywhere	Before the applicant's effective filing date
The invention is on sale	By anyone	Anywhere	Before the applicant's effective filing date
The invention is described in a publicly available printed publication	By another	Anywhere	Before the applicant's effective filing date
The invention is described in a patent	By anyone	Anywhere	Before the applicant's effective filing date
The invention is otherwise made available to the public	By anyone	Anywhere	Before the applicant's effective filing date
The invention is publicly used	By inventor, joint inventor, or another who obtained the subject matter of the invention directly or indirectly from the inventor	Anywhere	More than 1 year prior to the application effective filing date
The invention is on sale	By the inventor, joint inventor, or another who obtained the subject matter directly or indirectly from the inventor	Anywhere	More than 1 year prior to the application effective filing date
The invention is otherwise made available to the public	By the inventor, joint inventor, or another who obtained the subject matter directly or indirectly from the inventor	Anywhere	More than 1 year prior to the application effective filing date

9.2.4 Invention Is Non-obvious

An invention is obvious if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. For example, merely substituting a

screw for a nail would normally not be patentable, since both are commonly used fasteners.

In conducting an obviousness analysis, a patent examiner may combine multiple prior art references. The patent examiner cannot, however, combine references arbitrarily. The non-obviousness requirement requires that a patent examiner steps into the shoes of a person of ordinary skill at the time the invention was made and determines whether the claimed invention would have been obvious without using hindsight obtained by reviewing the patent application.

Every obviousness determination considers four (4) factual inquiries:

(1) The scope and content of the prior art;
(2) The differences between the prior art and the claimed invention;
(3) The level of ordinary skill in the pertinent art field at the time of the invention; and
(4) Objective evidence of obviousness or non-obviousness (i.e., "secondary considerations").

The scope and content of the prior art includes art that is directed to the same field of invention as claimed in a patent application and any other art that is logically relied upon. The prior art used in determining whether an invention is obvious is the same material defined as "prior art" under 35 USC § 102. For example, if an invention is directed to a touch screen smartphone with fingerprint recognition capability, an examiner might look to the touch screen art, cell phone art, fingerprint recognition software art, and any other art concerned with combining touch screens with cell phones or fingerprint scanning and reading.

Determining the differences between the prior art and the claimed invention is a useful starting point to determine whether the claimed invention would have been obvious in view of the prior art. If the differences between the prior art and claims are trivial, the claimed invention will likely be unpatentable as obvious in view of the prior art.

The level of skill required of a hypothetical person having ordinary skill in the art is more than an ordinary layperson but less than an expert in the field of the invention. Determining the level of skill in the art is a factual question that is often open to debate. Factors that are often considered in such a determination can include the level of sophistication in the technology, the education of ordinary person in the field, and prior art attempts to solve related problems.

Courts refer to objective evidence of obviousness or non-obviousness as "secondary considerations." Such secondary considerations include the following: long felt need for the invention, commercial success of the invention, and copying by others. For example, if there was a long felt need for the claimed solution to a problem, or if the invention is commercially successful, the claimed invention is

likely not obvious. Also, showing the prior art teaches away from the claimed invention can be used to support non-obviousness.

9.3 Types of Patents

There are several types of US patents issued by the United States Patent and Trademark Office (USPTO): utility, design, and plant patent.

Utility Patents
Utility patents are the most common, and they protect functional innovations including "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof." Utility patents protect the structure or function of an invention for a term of twenty (20) years from their earliest effective filing date.

Design Patents
Design patents protect "any new, original, and ornamental design for an article of manufacture" for a term of fourteen (14) years from their issue date for design patent applications filed prior to May 13, 2015. Any design patent that issues from a design patent application filed on or after May 13, 2015, is for a term of fifteen (15) years from their issue date. The subject matter of a design patent may relate to the configuration or shape of an article, to the surface ornamentation on an article, or to both. If a design is primarily the result of an article's function, a utility patent may be preferable over a design patent. For example, the following patents illustrate both a utility patent and a design patent for an Apple iPhone.

In the above examples, the utility patent (see Fig. 9.1 of US Patent No. 7,869,206) protects functional aspects of the iPhone, such as a "liquid crystal display (LCD)" and "a LCD controller." In contrast, the design patent (see Fig. 9.2 of US Design Patent No. D593,087) provides a different scope of protection directed to the appearance of the iPhone shown in Fig. 9.2.

Plant Patents
Plant patents are granted to an inventor who "asexually reproduces any distinct and new variety of plant, including cultivated sprouts, mutants, hybrids, and newly found seedlings, other than a tuber-propagated plant or a plant found in an uncultivated state" for a term of twenty (20) years after its earliest effective filing date. Asexual reproduction means to reproduce a plant without using seed and include techniques such as grafting, budding, or using cuttings, layering, or division in order to assure that offspring are substantially identical to the parent. Naturally occurring plant varieties, however, are not patentable.

U.S. Utility Patent No. 7,869,206

(12) **United States Patent**
Dabov et al.

(10) **Patent No.: US 7,869,206 B2**
(45) **Date of Patent: Jan. 11, 2011**

(54) **HANDHELD COMPUTING DEVICE**

(75) Inventors: **Teodor Dabov**, San Francisco, CA (US); **Hui Leng Lim**, San Jose, CA (US); **Kyle Yeates**, Palo Alto, CA (US); **Stephen Brian Lynch**, Portola Valley, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 139 days.

(21) Appl. No.: **12/205,826**

(22) Filed: **Sep. 5, 2008**

(65) **Prior Publication Data**

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G06F 1/16 (2006.01)

(52) **U.S. Cl.** **361/679.55**

(58) **Field of Classification Search** 361/679.55, 361/679.56

See application file for complete search history.

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Primary Examiner—Lisa Lea-Edmonds
(74) *Attorney, Agent, or Firm*—Beyer Law Group LLP

(57) **ABSTRACT**

A minimum Z height handheld electronic device and methods of assembly is described. The electronic device includes a single seamless housing having a front opening and a cover disposed within the front opening and attached to the seamless housing without a bezel.

27 Claims, 28 Drawing Sheets

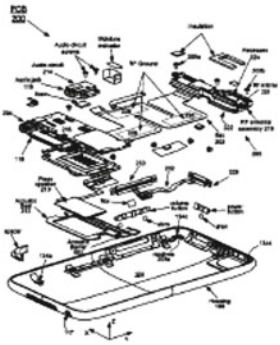

Fig. 9.1 Cover sheet of US Patent No. 7,869,206

U.S. Design Patent No. D593,087

(12) **United States Design Patent**
Andre et al.

(10) **Patent No.:** **US D593,087 S**
(45) **Date of Patent:** ** **May 26, 2009**

(54) **ELECTRONIC DEVICE**

(75) Inventors: **Bartley K. Andre**, Menlo Park, CA (US); **Daniel J. Coster**, San Francisco, CA (US); **Daniele De Iuliis**, San Francisco, CA (US); **Richard P. Howarth**, San Francisco, CA (US); **Jonathan P. Ive**, San Francisco, CA (US); **Steve Jobs**, Palo Alto, CA (US); **Duncan Robert Kerr**, San Francisco, CA (US); **Shin Nishibori**, San Francisco, CA (US); **Matthew Dean Rohrbach**, San Francisco, CA (US); **Douglas B. Satzger**, Menlo Park, CA (US); **Calvin Q. Seid**, Palo Alto, CA (US); **Christopher J. Stringer**, Portola Valley, CA (US); **Eugene Antony Whang**, San Francisco, CA (US); **Rico Zorkendorfer**, San Francisco, CA (US)

(73) Assignee: **Apple Inc.**, Cupertino, CA (US)

(**) Term: **14 Years**

(21) Appl. No.: **29/282,833**

(22) Filed: **Jul. 30, 2007**

Related U.S. Application Data

(63) Continuation of application No. 29/270,880, filed on Jan. 5, 2007, now Pat. No. Des. 558,756.

(51) **LOC (9) Cl.** **14-03**
(52) **U.S. Cl.** ..... **D14/341**; D14/203.7; D14/138 G
(58) **Field of Classification Search** ..... D14/137, D14/138, 147, 191, 218, 247–248, 341–347, D14/496, 138 R, 138 AA, 138 AB, 138 AC, D14/138 AD, 138 C, 138 G; D10/65, 78, D10/104; D13/168; D18/7; 455/556.1, 455/566, 575.1, 575.3; 345/169
See application file for complete search history.

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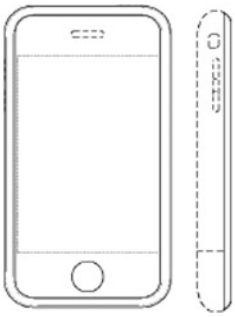

Fig. 9.2 Cover sheet of US Design Patent No. D593,087

9.4 Provisional Applications

In advance of filing a non-provisional or regular patent application, a provisional patent application may be filed to preserve an early filing date for one (1) year. The requirements for filing a provisional application include the following: providing a specification, providing drawing figures (if necessary to an understanding of the invention), payment of the official filing fee, and providing the name and home residence of each inventor. A provisional patent application is not examined by the USPTO. A provisional application may be converted into a non-provisional patent application at any time during the twelve (12) month period after filing. In addition, an applicant has one (1) year from its provisional patent application filing date to file any foreign patent applications claiming priority to the provisional patent application filing date.

Startups often consider the usefulness of provisional applications because the benefits of a provisional application are many. Provisional patent applications have lower costs, provide the rights to an earlier effective filing date, and have minimal filing requirements. Provisional patent applications remain confidential (and a potential trade secret) if the twelve (12)-month period lapses and the applicant decides not to pursue a non-provisional patent application.

Example Returning to the Startup Steve example, assume that Startup Steve inadvertently forgot to inform the startup company he works for that he submitted a description (some preliminary drawings of the bulb, its circuitry, and a brief description of how the smartphone app works) for the new LED light bulb to the Luminosity Journal for publication. Luminosity will publish tomorrow, and the startup company wants to file a patent application to preserve its rights to file a foreign patent application before the publication.

Because Luminosity publishes tomorrow, it is unlikely that the startup company and its patent attorney will have sufficient time to prepare a thorough non-provisional patent application. Under this scenario, the company should file a provisional application with as much data as it can possibly gather and submit before the Luminosity Journal publishes. The startup company will then have one year to file a non-provisional patent application, or any foreign patent applications claiming priority to its provisional application's filing date.

9.5 Non-provisional Applications

Once the decision is made to pursue patent protection for an invention, a non-provisional patent application should be filed with the United States Patent and Trademark Office (USPTO). The USPTO assigns a filing date and application serial number to the application. The filing date is important because it sets a date which "prior art" references must predate in order to reject the claims of the application.

9.5.1 The Anatomy of a Patent Application

A regular, or non-provisional, patent application must provide a specification that:

(1) describes the invention in sufficient detail to show one skilled in the art that the inventor possessed the claimed invention at the time of filing ("written description requirement");
(2) describes the invention in a manner that would allow one skilled in the art to make and use the claimed invention without undue experimentation (e.g., "enablement requirement").

The specification must conclude with one or more claims that particularly point out and distinctly claim the novel subject matter of the invention. Drawings may be required if they are "necessary for the understanding of the subject matter sought to be patented."[3] Finally, the application must include an Application Data Sheet naming the true and correct inventors and must include the requisite filing fee.

9.5.1.1 Claims

A patent application's claims are critical to defining the scope of protection sought in a patent. The claim's scope has been described as defining the "metes and bounds" of the patented invention. These "metes and bounds" define a patent holder's rights to exclude others from making, using, selling, offering to sell, or importing an accused invention. Thus, if an accused invention falls within a patent claim's scope, it infringes the patent's scope. Before reaching infringement, however, the claims must meet certain requirements.

[3] 37 C.F.R. § 1.81(a).

The claims must be supported by the specification. If the specification describes parts of an invention that are not defined in the claims, it is possible that such disclosure will be dedicated to the public. For this reason, the claims must particularly point out and distinctly claim the novel subject matter of the invention and should describe the invention as broadly as possible based on the specification.

The claims in a patent application are typically structured to include independent claims that broadly define the claimed invention, and dependent claims that further limit the scope of the independent claims. A dependent claim includes all of the limitation of an independent claim, but includes additional elements that further limit the independent claim. For example, a dependent claim may read, "The apparatus of claim 1, further comprising [additional elements]."

Example of an independent claim from US Publication No. 2005/0229405:

1. A food cutting utensil comprises the following:
   a body adapted to be manually grasped and
   a plurality of elongated, laterally spaced apart cutting blades projecting downwardly from the body and presenting lowermost, generally horizontally extending cutting edges for severing food into pieces when the utensil is pressed downwardly into the food.

Example of a dependent claim from US Publication No. 2005/0229405:

5. A food cutting utensil as claimed in claim 1,
   further comprising a stripper selectively shiftable downwardly between the blades for dislodging food pieces from between the blades.

9.5.1.2 Specification

The specification of a patent is the written description of the invention. It serves as a disclosure of the invention to the public. If the patent issues and becomes involved in litigation and a term in the claims is ambiguous, the court will look to the specification for guidance on how to construe the claim, (i.e., how the court will interpret the claim). There are several required sections that must be included in the specification. These sections include the following:

- ***The title of the invention*** The essence of the invention should be captured in as few words as possible. The title is limited to 500 characters.
- ***Statement regarding federally sponsored research (if applicable)*** If the invention is the result of federally sponsored research funding, the USA requires that this be disclosed in the patent application. If the invention is not the result of federally funded research, this section can be excluded from the specification.

- ***Abstract*** Each application must include an abstract of the invention. The abstract may not exceed 150 words.
- ***Background of the invention*** This section of the application discusses select, relevant art in the field and emphasizes the major differences between the art and the invention being claimed in the application. The purpose is to point out precisely any and all improvements and challenges that are overcome by the invention.
- ***Summary of the invention*** The summary is separate and distinct from the abstract of the invention. The summary focuses on the claimed invention. The summary is sometimes used to discuss the problems that exist with the prior art and is often used to highlight the advantages that the present invention has over the prior art.
- ***Description of the drawings*** This section provides a general overview roadmap to navigating the drawings that are included in the application. This section identifies each figure and provides a brief description of each.
- ***Detailed description of the invention*** This section is the heart of the patent application. An applicant provides a detailed description of the invention; its characteristics, preferred embodiments, definitions of terms, and specific examples of how to practice the invention are provided. The examples illustrate how the invention is meant to operate, and do not limit the claims of the invention in any way.
- ***Sequence listing (if applicable)*** A sequence listing is not very common because it is only a requirement for those applications that include nucleic acid or amino acid sequences. If sequences are disclosed in the specification, then they need to be included in a listing for easy reference.

Aside from these required sections, the specification must also satisfy three requirements set forth in the first paragraph of 35 USC § 112: The specification must contain a *written description* of the invention, and of the manner and process of making and using it, in such full, clear, concise, and *exact terms as to enable* any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.

Written Description Requirement

The specification must fully describe the invention recited in the claims with particularity. While the specification does not have to describe the claims verbatim, it must describe the claimed invention in such a manner that a person of ordinary skill in the application's technical field would understand the claimed invention. Also, the specification should describe as many alternate embodiments of the invention as reasonably permissible in order to avoid any rejections by the USPTO for the lack of written description.

Example A patent application specification that describes high-definition Wi-fi video camera technology and control systems is filed by a startup company. After filing the patent application, the company learns that consumers prefer Wi-fi video camera with recording capabilities, programmability, and smartphone app controls, and would like to pursue patent protection for these other embodiments of the invention. Because the company's original patent application did not disclose recording capabilities, programmability, and smartphone app controls, any claims to such embodiments will likely be rejected as not being supported by the specification. Instead, the startup can pursue these other embodiments via the filing of a continuation-in-part patent application (which is discussed in Sect. 9.5.5 of this chapter).

Enablement Requirement

The enablement requirement requires that the specification, at the time the application is filed, describes the invention in such a manner that a person of ordinary skill in the art could *make* and *use* the claimed invention without undue experimentation. The fact that a person of ordinary skill in the art is required to perform *some* experimentation when carrying out the claimed invention does not mean that such experimentation is "undue." However, the quality or quantity of any such experimentation must not be unreasonable or unduly burdensome.

Example Startup Stacy has developed a new material for bakeware, which has a unique chemical composition that results in an even heat distribution and non-stick properties—literally nothing sticks to the bakeware. Startup Stacy found that baking the material at a low temperature in a pressurized atmosphere gave the new material enhanced qualities. In a patent application for the new material, Startup Stacy openly discloses the specifics of the chemical formulation in the specification of the patent application; Startup Stacy also discloses the use of a pressurized atmosphere in the production of the material, but Startup Stacy guards the details of the pressurization process as if they were a trade secret. Since Startup Stacy failed to disclose the details of how to use the pressurized atmosphere in the production process of the material, a person of ordinary skill in the relevant art would not be able to determine the exact temperature and pressure to use without undue experimentation. Startup Stacy has not provided sufficient description because the disclosure is not sufficient to enable others to practice the invention.

9.5.2 Assignment of Patent Rights

A patent conveys to the patent holder a bundle of rights: the right to exclude others from making, using, selling, offering for sale, or importing a patented invention into the USA. Inventors may hold the rights to a patent, or the inventors may assign their rights in the patent or patent application to another. For instance, there are many inventors whose job is to create new, patentable inventions, and as part of their job, these inventors are often required to assign any and all patent rights to their employer.

A patent assignment is the legal transfer of ownership of a patent or patent application to another. Assignment is often part of an employment agreement, or other contract. A sample assignment can be found in Appendix C.

9.5.3 Inventorship Versus Ownership

The actual inventor(s) of the subject matter that is being patented must file a US patent application. Determination of inventorship can be a difficult task that requires legal analysis. "Conception" of the invention is typically considered the key for determining inventorship. Conception is the mental formulation and disclosure by the inventor or inventors of a complete idea for a product or process. Mere contributions of labor or supervision are typically insufficient to vest inventorship rights in the invention. In contrast, in the academic setting, it is often discretionary to name contributors of a research project on published articles. However, naming inventors of a patent application is not discretionary. If the inventorship on an issued patent is incorrect, a court may invalidate the patent.

Example Two entrepreneurs, Mike and Richard, equally contributed to the conception of a new date tracking app. Users can log who they went on a date with and can rate the date, record notes, and decide whether they would ever like to date the person again, and all this information can be stored in the app.

Two interns, Kevin and Nicole, initially tested the user friendliness of the app under the direction of Mike. Kevin and Nicole together decided it would be easier for users to use the app if there was a swipe vertically up feature that would store positive data about a date, and swipe vertically down feature that would allow the user to store negative or neutral data about a date.

The startup company that employs Mike, Richard, Kevin and Nicole, decides to file a patent application for this invention and needs to determine the inventor(s).

In this example, if the startup company decides to pursue claims in a patent application directed to the app itself, Mike and Richard should be considered the inventors. If the company decides to pursue claims to a method of using

the app that includes the swipe vertically up or down feature, then Mike, Richard, Kevin, and Nicole should be identified as the inventors

Ownership is a different matter. A patent will always need to list of who the inventors are, but ownership can be held by someone other than the inventors, such as an assignee. Whoever owns the rights to a patent or patent application has the ability to sell the patent, or to do anything else they would like with the patent rights that have been assigned to them. This could include the following:

- licensing the right to sell the invention;
- licensing the right to use the invention;
- making a new assignment of the rights to the patent or patent application; or
- selling the rights to the patent or patent applications.

9.5.4 What to Expect: The Patent Application Examination Process

After filing a patent application, the USPTO assigns the application to a patent examiner for examination. During examination, the examiner ensures that the application satisfies all formal requirements for the specifications, claims, and drawings. The examiner also conducts a search of available prior art references using search databases, including the Internet. Following the examiner's initial examination and search, the examiner will usually issue an objection to the application for failing to satisfy a formal requirement, or reject the claims as anticipated or obvious in view of the prior art discovered during the examiner's search.

In response to an Official Action, the applicant, typically through his or her patent attorney, can submit a formal response to address the rejections noted by the examiner and distinguish the claimed invention over the prior art. By distinguishing the claimed invention over the prior art, the applicant may amend the claims. Claim amendments are not required and may be particularly unnecessary when an examiner misinterprets a reference or improperly combines references to support a rejection.

After filing a response to an Official Action, the examiner considers the arguments or amendments and makes a determination as to whether to issue a subsequent Official Action or to allow the application. If the examiner issues another Official Action, the applicant will be given opportunity to respond. There is no limit on the number of Official Actions that can issue in the patent application process, although after a first action, examiners will usually issue a final office action, which can have the effect of closing prosecution. If prosecution is closed in an application, an applicant can file a Request for Continued Examination (RCE) along with a response and the USPTO official fee. If the examiner decides to allow the

application, the applicant will receive a Notice of Allowance, which will have a set period of time for the applicant to pay a fee in order to have the application officially issue as a US patent.

9.5.5 Continuing Applications

US patent law allows applicants to file continuing patent applications claiming the benefit of the disclosure and filing date of an earlier-filed co-pending application ("parent application"). The parent application does not have to be the first or earliest filed application in a chain of continuing applications; it just has to be a related application that is co-pending at the time of filing. Continuing applications must share at least one common inventor with the parent application, make a specific claim of priority to the parent application, and be filed while the parent application is co-pending. Although continuing applications claim the benefit of the earlier-filed "parent" application, they are newly filed applications that restart the examination process.

There are three (3) types of continuing patent applications recognized in US patent practice:

(1) Continuation applications;
(2) Continuation-in-part applications; and
(3) Divisional applications.

Continuation applications have the same specification as the parent application but with different claims. Continuation applications are useful to:

(1) claim subject matter that was disclosed but not fully claimed in the parent application;
(2) seek broader, narrower, or different claim coverage;
(3) present new arguments in support of allowance of the application after a final rejection is received or prosecution is closed[4]; or
(4) keep an application pending to capture developments not specifically addressed by any of the issued claims.

Divisional applications can be filed in response to an Office Action from the USPTO, which states that the claims of the parent application are directed to two or more distinct inventions (e.g., claims to a product and claims to a method of making a product can be considered distinct inventions) .

A continuation-in-part application ("CIP") is a later-filed application that repeats some substantial portion, if not all, of the parent application's disclosure, and,

[4]A Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 can be filed upon payment of the requisite fee to present new arguments or claims in an application after a final rejection as an alternative to filing a continuation application.

generally, adds new subject matter not disclosed in the parent application. Claimed subject matter that is supported by the parent application is entitled to the effective filing date of the parent application. Claimed subject matter that is not supported by the parent application has the filing date of the CIP. Generally, CIPs claim new or related embodiments of an invention not disclosed in the parent application while effectively maintaining the filing date of the parent application for all originally disclosed subject matter. Although the applicant always has the option of filing a new application for this new subject matter, the priority claim for a CIP application may prevent the parent application itself from being cited to reject any original subject matter from the parent application that is claimed in the CIP.

Example Startup Steve files a patent application describing a Wi-fi video camera technology and control systems for his startup company. After filing the patent application, the company learns that consumers prefer Wi-fi video camera with recording capabilities, programmability, and smartphone app controls. Startup Steve may be able to file a continuation-in-part (CIP) application to describe and claim the new embodiments that have recording capabilities, programmability, and smartphone app controls. By filing a CIP application, the priority date for all subject matter in the CIP that overlaps with the original application disclosure will have the original application's filing date. All new subject matter will be entitled to the CIP application's filing date. Such a continuation-in-part application must be filed while Startup Steve's original patent application or an application claiming priority thereto is still pending (i.e., not an issued patent) .

9.6 Going Global: International Patent Considerations

Rules for obtaining a patent differ from country to country. Patent protection in other countries requires international filings, usually with each country's patent office. Most countries permit applicants a non-extendible period of one (1) year from the date of filing a US patent application in which to file their patent application. In most countries, if a foreign patent application is filed within this one (1)-year period and claims priority to a US patent application, the US patent application filing date is the applicable priority date of the application.

The US and approximately one hundred twenty (120) other countries are signatories to the Patent Cooperation Treaty (PCT) that permits patent applicants to file international patent applications, also known as PCT applications. A PCT application is similar to a US provisional application in that it preserves priority and never issues as a patent. Within thirty (30) months from the PCT priority date, the applicant must file individual patent applications in all countries in which examination is desired (i.e., PCT applications provide an additional eighteen (18)-month

time to file foreign application beyond the typical one (1)-year period for filing priority foreign applications). Filing a PCT application can be advantageous in the following respects:

(1) If an applicant is interested in filing a patent application in numerous countries, a PCT application permits the applicant to have the benefit of a PCT patent examiner's prior art search and results before incurring the expense of filing numerous patent applications;
(2) A PCT application gives an applicant additional time (30 months from the PCT filing date) to delay the expenses associated with applying for patent protection in individual countries; and
(3) Many countries give deference to a PCT examiner's examination search and opinion on patentability, which can reduce the costs of prosecuting a patent application in individual countries.

Example Startup Steve assigns his patent to the startup company that employs him. The startup company wants to pursue US and foreign patent protection for the LED light bulb and phone app. The company would like to file its patent applications as soon as possible, but is unsure as to how successful the product will be and is hesitant to spend too much on international patent protection.

If the startup company files a PCT application, it will have up to 30 months to determine in which countries to pursue protection. This will provide the company with additional time to evaluate the commercial success of the product and target select foreign markets. A PCT application will also give the company the benefit of a single examination, which can assist its determination of how much to invest in both US and international patent protection.

9.7 Patent Protection for Software

Patent protection is available for software and is becoming a more popular means of protecting the intellectual property behind software, particularly for small startup software companies. It is understandable that a startup with limited capital may view the patenting of its software to be an unacceptable use of precious funds. In an industry like software programming, where code changes and develops at incredible speed, it may seem at odds with the snail's pace at which a patent makes its way through the United States Patent and Trademark Office. This perception often leads startup software companies to the presumption that it is more affordable and a better business strategy for the startup to utilize first-mover advantage to monetize newly developed software, rather than bother with obtaining a patent on the software.

While first-mover advantage has the benefit of quickly capitalizing upon a company's newest software development, there are high risks associated with utilizing first-mover advantage as a business strategy. This can doom an up-and-coming company if its competitors get a hold of the unprotected software or are able to quickly reverse engineer the software. If the startup has developed software that spurs the development of a new technology, or serves as a base platform for the development of new technology, being the owner of that software could be immensely profitable if the IP rights are properly protected.

As the use of software has grown, for patentability purposes, software-based inventions have been characterized as one of a more defined process, or when in conjunction with a computer, it has been considered a unique machine. There are instances where software has been considered to fall into both categories as well. To be patentable subject matter, the involvement of a computer or the Internet must be integral in the software method's successful operation.[5] The software must be non-obvious and useful.

Sometimes, software consists of additional elements, which may be in need of patent protection, such as the graphical user interface (GUI) associated with a program. These non-functional and ornamental aspects of the program may be protected with a design patent. "Whoever invents any new, original, and ornamental design for an article of manufacture may obtain a patent therefor."[6] An object with a design that is substantially similar to the design claimed in a design patent cannot be made, used, copied, or imported into the USA. Design patents are limited in their scope, protecting only ornamental, non-functional designs rather than functional elements. Protection under a design patent is shorter than that for a utility patent and lasts for only fifteen (15) years from the date of issuance, and the coverage of the design patent is defined by a single claim directed to the images included in the design patent. Any elements of the design patent drawings that are drawn in dashed lines represent an unclaimed feature of the design, meaning it is not part of the patented design.

Design patents can be sought for many different ornamental designs. Some examples include the design of a product, product packaging, font, icons, and patterns. Design patents provide brand protection because they protect the appearance of a product or its packaging, preventing another from creating a copy or look-a-like product. Due to the narrow scope of design patents, it is a common intellectual portfolio management strategy to procure multiple design patents for a single product. Each design patent embodies a slight variation or modification to the original design. Possessing a collection of design patents on a single product broadens the scope of protection afforded to the design of the product.

In recent years, GUIs have been the subject of design patents in the USA. GUIs are eligible for design patent protection if the user interface is embodied on a

[5]Ultramercial, LLC v. Hulu, LLC, 657 F.3d 1323 (Fed. Cir. 2011), *reh'g and reh'g en banc denied*, No. 2010-1544, 2011 US App. LEXIS 25055 (Fed. Cir. 2011).

[6]35 USC § 171.

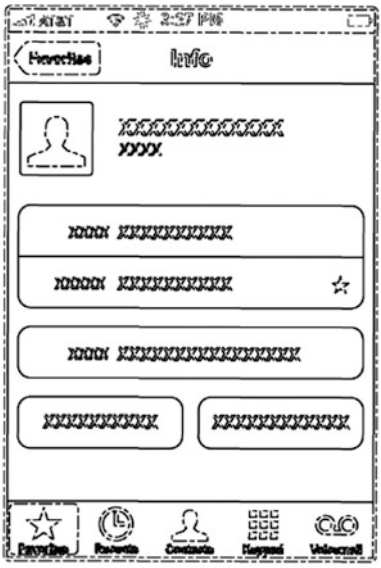

Fig. 9.3 Fig. 1 of US Design Patent No. D608,366

display screen; that is, the drawings in the design patent depict an icon or interface embodied in an article of manufacture, such as a computer screen, smartphone display panel, or monitor.

Example US Design Patent D608,366 claims "The ornamental design for a graphical user interface for a display screen or portion thereof, as shown and described." The patent also includes a figure depicting the claimed GUI (see Fig. 9.3).

GUI embodiments drawn in an article of manufacture satisfy the "article of manufacture" requirement of 35 USC § 171. Furthermore, non-static computer-generated icons, or icons that change in appearance during viewing, may also be protected by a design patent. The change must be noted in the claim language and shown in two or more views in the design patent drawings. The drawings should depict the change in the icon over time.

Example US Design Patent D613,300 claims "The ornamental design for an animated graphical user interface for a display screen or portion thereof, as shown and described." The patent also includes 18 figures (10 of which are shown in Fig. 9.4) depicting how the claimed computer-generated icon changes over time.

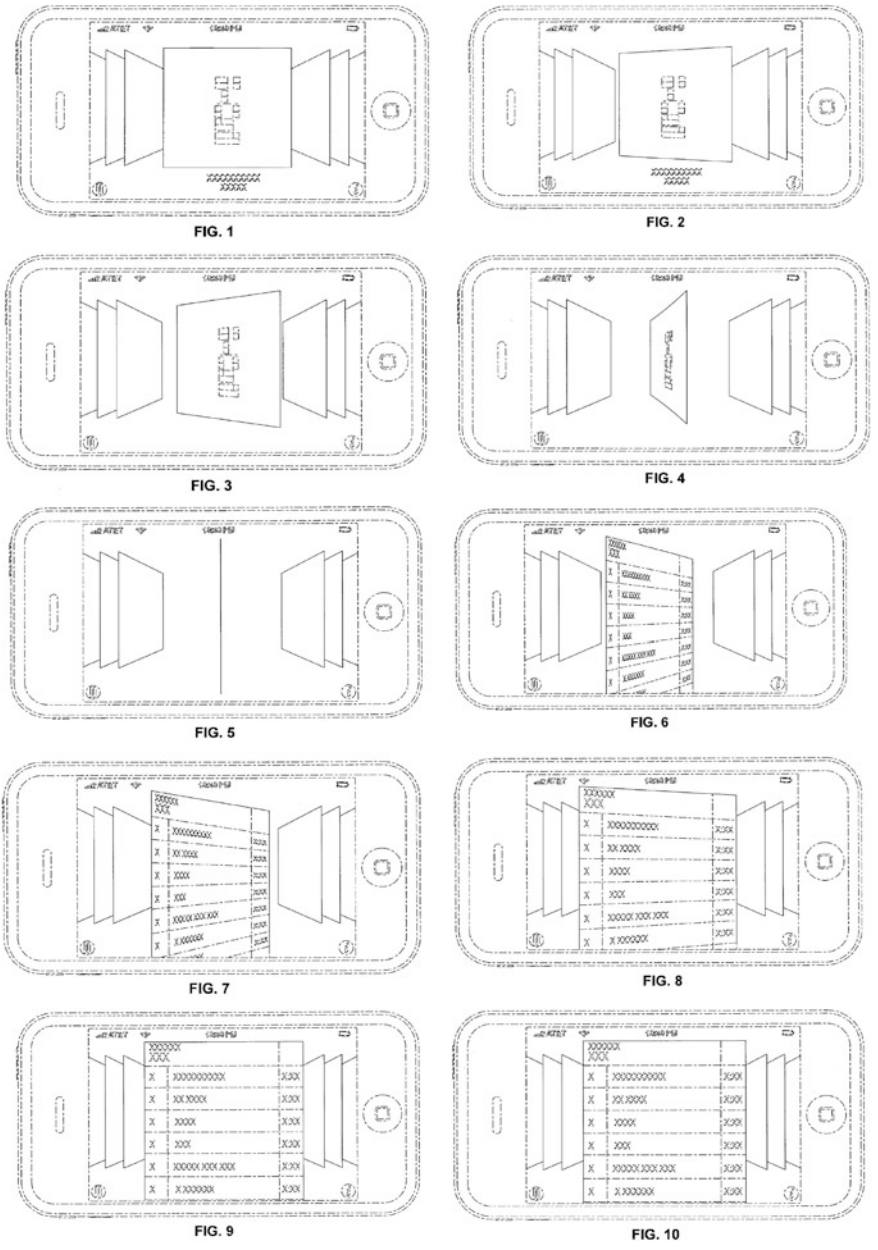

Fig. 9.4 A series of Figs. 1–10 from US Design Patent No. D613,300

Software is often used to implement an abstract idea. In order for software to be patent eligible, software patent claims must be rooted in sufficient technology, i.e., hardware, to support the implementation of the abstract idea codified by the software code. But the mere recitation of a generic computer, or generic hardware, is not enough. The technology behind the implementation of the abstract idea must be inventive in order to make the software claims patent eligible.

Any startup that is interested in patenting software, or software applications, should consult with an experienced patent attorney who specializes in software patents. The case law[7] surrounding the patentability of patents is complicated, and software patent claims need to be drafted in a particular way in order for the USPTO to examine them as patentable subject matter.

[7]Alice Corp. v. CLS Bank International, 573 US __, 134 S. Ct. 2347 (2014).

Chapter 10
Trade Secrets

Abstract Trade secret law provides a mechanism for protecting proprietary and sensitive business information. A trade secret, by definition, is information that has economic value and is secret. There are no formal application requirements to obtain a trade secret. Unlike patents, there are no statutory requirements that a trade secret must be novel, useful, or non-obvious, and there is no examination process. Trade secret protection arises once the appropriate steps are taken to create and maintain a valid trade secret. Trade secrets are not subject to a predefined term and can be maintained for an indefinite period of time. A trade secret owner has the right to prevent others from misappropriating the trade secret. Misappropriation is the improper acquisition, disclosure, or use of a trade secret. However, under trade secret law, independent discovery and use of the trade secret is not a misappropriation of the trade secret, meaning that if someone reverse engineers or independently discovers the trade secret, they are free to use it. Once the public knows the secret, trade secret protection is lost.

10.1 Secrecy Creates Value: How Startups Utilize Trade Secret Protection

A trade secret can have immense value to a startup company. Trade secret protection is one of the most affordable forms of intellectual property (IP) protection. When used appropriately, trade secret information can increase the value of a startup business.

Trade secrets can generate value in many ways. The value could be derived from having information that has economic value on its own so long as few people know about it (e.g., having a secret recipe). But sometimes value can be derived from knowing what others do not know that does not work. Years of hardwork determining what does not work can have value as well (e.g., years of trial and error refined a manufacturing process down to an economic and ecological success). Trade secrets can create cost savings, can provide a startup with a strategic advantage in the marketplace over competitors, and can even be used as a marketing tool.

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_10

For many startups, trade secret protection is an attractive intellectual property protection strategy since it is affordable compared to patent protection. Trade secret protection could be useful at the outset, but certain IP, such as inventions, may need to be protected by a patent later down the road. In this way, trade secret protection of an invention may serve as a stopgap measure until the startup is better funded. Trade secret protection is also a good option when other forms of IP protection are unavailable for the specific information being protected.

10.2 What Laws Protect Trade Secrets?

10.2.1 The Uniform Trade Secrets Act

Unlike patent law, which has its roots firmly grounded in federal constitutional and statutory law, trade secret law is a state law doctrine that developed out of the common law doctrine of unfair competition and unfair business practices. Until passage of the Uniform Trade Secrets Act (UTSA) in 1985, trade secret law varied significantly from state to state. The UTSA is a model law that provides a uniform definition of trade secrets and misappropriation, and 48 states, the US Virgin Islands, and the District of Columbia, have adopted it.

The UTSA defines a trade secret as "information, including a formula, pattern, compilation, program, device, method, technique, or process, that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy." This broad definition maintains the common law that nearly any type of business information can qualify as a trade secret. Thus, information that is not otherwise patentable can be trade secret. Examples of information that can be protected by trade secret include:

• Computer programs	• Customer lists
• Client identities	• Vendors
• Product pricing	• Market analysis
• Manufacturing processes	• Formulas
• Technical information	• Product testing results
• Drawings	• Prototypes
• Strategic plans	• Company manuals
• Schematics	• Product ingredients
• Financial statements	• Employee records
• Employee salaries	• Market strategies

Because information of nearly any type of subject matter can qualify as a trade secret, the UTSA definition of a trade secret focuses on the following:

(1) The economic value of the trade secret;
(2) Whether the trade secret is generally known or readily ascertainable; and
(3) The efforts taken to maintain secrecy.

The "economic value" requirement under the UTSA refers to whether a competitor would obtain an economic benefit if the trade secret information became readily accessible. "Economic value" can be shown by the time and effort utilized in creating the trade secret, or by showing that a third party would have to spend time and effort in creating the same trade secret.

The second requirement for a trade secret under the UTSA is that the information cannot be "generally known or readily ascertainable." This means that the information cannot be already known by the public or by competitors. Whether a trade secret is "generally known or readily ascertainable" is a factual inquiry that depends on the amount of time, effort, and money required to independently produce the trade secret, or to reverse engineer the trade secret. Information cannot be protected by a trade secret if it can be discovered by examining a commercially available product that incorporates the information. If the trade secret is hidden in a commercially available product, then the trade secret can be maintained. A trade secret that consists of the amounts and ratios of individual ingredients in a product or code embedded in a software program is not lost just because the product becomes publically available.

Published information, such as that disclosed in a book, magazine, trade publication, Web site, or other media, cannot be maintained as a trade secret because it is "generally known" and readily ascertainable. This can be particularly important when deciding whether to keep information as a trade secret or to pursue patent protection for that information. Anything disclosed in a patent or published patent application is generally known and readily ascertainable and cannot be protected as a trade secret.

The final and often most important criterion for a trade secret under the UTSA is that reasonable efforts must be taken to maintain secrecy of the information. Maintaining secrecy of a trade secret is viewed under a reasonable standard that does not require absolute secrecy. A court considers several factual inquiries when considering reasonable secrecy:

- Whether employees have executed confidentiality or non-disclosure agreements;
- Whether the company's confidentiality policy is memorialized in writing;
- Whether access to the trade secret has been limited to essential employees/contractors;
- Whether employees who are privy to the trade secret are aware that it is to be maintained as a trade secret;
- Whether the information is kept in a restricted area such as a locked file, within security-encrypted software, in a restricted location within a physical plant;

- Whether documents containing information that is trade secret are properly labeled; and
- Whether the company actively screens employee publications, presentations, etc., for disclosure of trade secret information.

In addition to these factors, it is important that the owner of the trade secret takes steps to enforce secrecy of the information. Mere intent to keep information secret, without affirmative acts, is typically insufficient to maintain a trade secret.

Example A startup has a great new app that uses a new algorithm to enhance data compression. The algorithm is what makes the app work, and the startup has decided to protect the algorithm by keeping it a trade secret.

Merely deciding to keep the algorithm a secret is not enough. The startup must take steps to keep the algorithm secret. This could include keeping the algorithm from being seen by employees, or limiting knowledge about the algorithm to employees who have a need to know the algorithm. The startup could also take steps to encrypt the algorithm so that the algorithm is not easily discovered by others or through reverse engineering.

10.2.2 The Defend Trade Secrets Act

In 2016, federal legislation was passed for defense of trade secrets by way of the Defend Trade Secrets Act (DTSA) of 2016. Under the DTSA, trade secret owners can bring a civil suit for misappropriation of trade secret information as a federal cause of action.[1] Even though the DTSA is federal law, it does not preempt state trade secret laws. Rather, trade secret holders have the option to bring suit under federal law, which is accomplished via the DTSA, or state law, which is accomplished either under the UTSA or state trade secret protection laws. The DTSA is largely modeled on the UTSA, and the two share similar definitions of trade secrets, similar elements for establishing a misappropriation of trade secrets claim, and similar remedies—namely equitable remedies, actual damages, punitive damages, and reasonable attorneys' fees. While trade secret misappropriation claims brought under state law have varying statute of limitations based on the state in which the claim is brought, misappropriation claims brought under the DTSA have a three-year statute of limitations.

The DTSA also offers a new and unique remedy that is not available under the UTSA. Namely, injured parties can seek an ex parte seizure order, which allow for the seizure of trade secret intellectual property when seizure is necessary to prevent

[1] 18 USC § 1836.

the dissemination or propagation of the trade secret information.[2] This remedy is only available in limited circumstances, where:

- An alternative form of equitable relief is unavailable or inadequate because the offending party would simply evade, avoid, or otherwise not comply;
- The seizure order is necessary to prevent immediate and irreparable injury;
- The harm to the trade secret holder outweighs the interests of the party to be enjoined by the seizure order and substantially outweighs potential harm to other third parties;
- The trade secret owner is likely to succeed on the merits;
- The offending party to be enjoined by the seizure order has actual possession of the trade secret in question;
- The application for the seizure order describes the subject matter and/or content to be seized with reasonable particularity;
- The party to be enjoined by the seizure order would destroy, move, hide, or otherwise make the trade secret information in question inaccessible to the court; and
- The trade secret holder has not publicized the requested seizure.

Because the seizure order is in fact a seizure of property, whether the property is in fact misappropriated or not, the application for the seizure order must also satisfy the basic requirements for a lawful seizure of property, such as the application for the seizure order must contain a detailed description of the trade secret property to be seized such that the seizure of property is as narrow as possible.

10.3 Independent Discovery and Reverse Engineering of Trade Secrets

Under patent law, a subsequent inventor can be liable even though the invention was developed completely independently and without knowledge of the patented invention. Under trade secret law, independent discovery and use of the trade secret is not a violation. Further, competitors often try to uncover and trade-off of one another's trade secrets by "reverse engineering" the trade secret, which is a legally acceptable practice. The comments to the UTSA state that "reverse engineering" is a proper means of discovering a trade secret and identify reverse engineering as "starting with the known product and working backward to find the method by which it was developed. The acquisition of the known product must, of course, also be by a fair and honest means, such as purchase of the item on the open market for reverse engineering to be lawful…." Thus, discovery of another's trade secret requires proper acquisition of the information and ethical business practices.

[2] 18 USC § 1836(b)(2)(A)(i).

Example Code Rebel is a remote access software solutions company that allegedly downloaded a trial version of Aqua Connect's "ACTS" software and then reverse engineered the program code, which Code Rebel then used to create its own iRAPP Terminal Server solution. According to Aqua Connect, Code Rebel misappropriated Aqua Connects trade secret information.

Despite the fact that the trial version of the ACTS software required acceptance of a clickwrap End User Licensing Agreement to access the program, with one of the terms being that the end user will not reverse engineer the program, the US District Court for the Central District of California held that reverse engineering software in violation of a form end-user license agreement, without more, does not rise to the level misappropriation of a trade secret.[3]

10.4 Theft of Trade Secrets: Misappropriation

A trade secret owner has the right to prevent others from misappropriating the trade secret. The UTSA defines misappropriation of a trade secret as:

(i) acquisition of a trade secret of another by a person who knows or has reason to know that the trade secret was acquired by improper means; or
(ii) disclosure or use of a trade secret of another without express or implied consent by a person who

  (A) used improper means to acquire knowledge of the trade secret; or
  (B) at the time of disclosure or use knew or had reason to know that his knowledge of the trade secret was

    (I) derived from or through a person who has utilized improper means to acquire it;
    (II) acquired under circumstances giving rise to a duty to maintain its secrecy or limit its use; or
    (III) derived from or through a person who owed a duty to the person seeking relief to maintain its secrecy or limit its use; or

  (C) before a material change of his position, knew or had reason to know that it was a trade secret and that knowledge of it had been acquired by accident or mistake.

In summary, misappropriation is the improper acquisition, disclosure, or use of a trade secret. A trade secret can be misappropriated even if the misappropriating party is not identically duplicating the trade secret.

[3]Aqua Connect, Inc. v. Code Rebel, LLC et al., Case No. CV 11-5764-RSWL (C.D. Cal. 2012) (Lew, J.).

Trade secrets can be lost or stolen from startups in a variety of ways: theft, bribery, misrepresentation, and breach of a duty to maintain secrecy are all common acts that trigger the loss of a trade secret. Violating a confidentiality or non-disclosure agreement, or obtaining the trade secret from a third party that is bound by a duty of confidentiality, can give rise to an action for misappropriation. For example, a common means by which trade secrets can be lost or stolen is typically through unhappy or former employees who use or disclose the trade secret information apart from the startup company.

When a company discloses its trade secret to others, such as employees, manufacturers, suppliers, consultants, those disclosures should be made under a written duty of confidentiality. This is typically done by requiring the party to execute a confidentiality or non-disclosure agreement, by way of employment contract, or third-party consulting, or supplier agreement. If a party under a duty of confidentiality with the trade secret owner breaches that duty, the trade secret owner's enforcement effort will benefit from a written agreement that clearly recognizes the trade secret status of the information.

The UTSA identifies a number of remedies for misappropriation of trade secrets including injunctions, damages, and attorney's fees. The UTSA even permits recovery of both the actual loss created by the misappropriation and any unjust enrichment resulting from the misappropriation that is not included in the "actual loss" portion of the damages. If actual loss for the misappropriation is difficult to prove, the trade secret owner may seek a "reasonable royalty" as compensation for the misappropriation. If the acts resulting in the trade secret misappropriation are willful or malicious, the UTSA grants the court discretion to award attorney's fees to the trade secret owner.

10.4.1 Corporate Espionage

There is a difference between gathering competitive intelligence on a competitor and corporate espionage. Competitive intelligence is the gathering information on a competitor legally and ethically while corporate espionage involves illegal activities such as tapping a competitor's telephone lines or stealing their garbage to learn secret information about the competitor. Abusing a position of power or special credentials at one's old company to provide information to a new employer is also a form of corporate espionage. Theft of trade secrets is often a serious problem when employees leave one company and move to a competitor.

Example While working as a project engineer at Netgear Inc. in 2005, Suibin Zhang was offered a position with Broadcom Corporation. Netgear has close business relations with Marvell Semiconductor Inc., and Broadcom is one of Marvell Semiconductor Inc.'s leading competitors.

Due to his position at Netgear, Zhang had access to Marvell's secure database information and accessed that information after accepting the position with Broadcom but before leaving Netgear. For nine days, Zhang allegedly downloaded confidential information belonging to Marvell, including trade secret information. Marvell's trade secret information was later loaded onto a Broadcom-issued laptop by Zhang. The FBI apprehended Mr. Zhang and found the trade secret information in Zhang's possession. He was charged and convicted of theft of Marvell's trade secret information.

10.4.2 Employee Poaching

"Employee poaching" is a controversial business practice where companies are accused of recruiting employees from competitors so that they can gain access to the competitor's trade secrets or technical know-how. The competing company dangles a tantalizing carrot for the employee it seeks to poach; better compensation and/or great benefits, for example, in an effort to get the employee to defect. To prevent employee poaching, companies will often try and put restrictions on their employees to protect confidential company information. It is common for employment agreements to include non-compete clauses or a covenant not to compete. These clauses are designed to prevent employees from taking up employment with competitors.

Larger companies are often more at risk for employee poaching. Many startups offer workers a lot more freedom than larger corporations, and so many workers make the leap to startups and may inadvertently, or deliberately, take confidential information, such as trade secret information, with them to the startup.

However, in recent years as the excitement surrounding startups, especially in the tech industry, which has heated up, large companies have been accused of poaching top-talent from small startups. Employees often go to the big companies because they can offer more stability than startup life.

No company—startup or conglomerate—wants to be labeled as "anti-employee mobility." It is very bad for business, and for attracting new, talented employees. As such, a company needs to carefully evaluate how to go about preventing and discouraging employee poaching. Litigation for employee poaching can be an expense that a startup cannot endure financially, so resorting to litigation over a poached employee should be reserved as a last resort to protect stolen confidential information. Other measures could be implemented to reduce the chance of employee poaching and protecting confidential company information, such as follows:

- **Effective use of employment agreements**. As previously mentioned, incorporating non-disclosure agreements and reasonable non-compete agreements into employment contracts can be an effective deterrent to employee poaching.

By imposing a legal obligation on employees to remain loyal and keep company information confidential, a startup can demonstrate how significantly employee loyalty is valued at the startup.

- **If it is feasible, compensation packages can be persuasive in retaining employee loyalty**. When employees feel adequately compensated for their work, they are more likely to stay with their current employer. Startups are generally tight on cash, but an investment in retaining employees, such as with stock options or the like, is almost always a good investment.
- **Bonus compensation for staying with the startup**. Maybe it is not feasible to pay employees a premium salary at the outset, but it might be possible to retain employee loyalty with bonus compensation once the startup starts seeing success.
- **Vesting equity options**. Alternatively, startups could grant shares of equity in the company with a vesting period in an effort to retain employees.

10.4.3 Cybertheft

Cybercrime has been on the rise for the past few years, and companies have increasingly become the target for cybertheft. Flawed networks, weaknesses in cybersecurity measures, and careless employees can all contribute to system vulnerabilities that make a company an easy target for a cyberattack. Cybercriminals often target company information that is valuable so long as it remains secret, such as customer information, client lists, and trade secret information.

One example where cybercrime is becoming increasingly more common is among entities that use cloud computing. Cloud computing is a very popular tool used by many businesses and startups to manage their information systems. Cloud computing is a strategic technology designed to deliver computing and storage capacity as a service that is provided by a third-party vendor. A business and its employees are the end users of cloud computing services. All of the storage space and software used by end users is stored remotely on servers that are owned and maintained by the third party. The end users typically access the services and storage space of the cloud in exchange for a fee. Cloud computing is an attractive and cost-effective alternative to managing and maintaining information systems in-house. While moving business operations to the cloud may be more convenient and efficient than traditional means, there are some potential risks to be considered before making the business decision to move to the cloud.

Because trade secrets are only protected by the fact that they are secret, and protection is forever lost once the information is disclosed, efforts to protect trade secrets should be vigilant and cautious. It is never a good assumption that information uploaded to the cloud will be safe without first learning about the safety mechanisms put in place by the cloud vendor.

- Does the cloud vendor practice data encryption on its servers?
- What sort of anti-hack precautions are taken by the cloud vendor?
- Will the cloud provider submit to security audits?

Additionally, the business should be aware that there is no guarantee that a hack or inadvertent leak of its confidential information will not occur. Prospective end-user companies that are interested in moving their business to the cloud should first investigate the technical details of how the cloud provider protects client information.

Whether a startup company's trade secret information, which is stored in a cloud, is likely to lose its trade secret status as a result of being stored in the cloud (by a third party) is a legal question that is yet to be determined by the courts. Because the trade secret owner must take reasonable efforts to maintain the secrecy of the trade secret, the cloud vendor, acting as the agent for the company, must also take reasonable efforts to maintain its end-user clients' trade secret information. In order to best protect the interests of the company, the company should investigate in detail the reasonable efforts claimed to be taken by the cloud vendor for protecting the information of its end-user clients.

Chapter 11
Copyrights

Abstract Copyrights protect original works of authorship fixed in a tangible medium of expression. Copyrighted works include literary, dramatic, musical compositions, movies, pictures, paintings, sculptures, and computer programs. Copyright protects the expression of an idea, but not the idea itself. Copyright protection is often used by startups because it is a relatively affordable form of intellectual property protection. Copyright protection is created the moment that a work is fixed in a tangible media. In effect, obtaining a copyright is essentially "free" since registration of the copyright is not required, but is highly recommended. Registration of a copyright is a prerequisite to litigating a copyright claim and is desirable to preserve the remedies for attorney's fees and statutory damages. Copyright protection is a good form of intellectual property protection for software and apps developed by startups, as it is sometimes difficult to obtain other forms of intellectual property protection on these ideas.

11.1 Copyrightable Subject Matter

The Federal Copyright Act protects authors' creative works. "Copyright protection subsists … in original works of authorship … fixed in a tangible medium of expression …."[1] Copyright automatically arises upon the creation and fixation of an original work. For the startup industry, fixation of an original work may include advertising and marketing materials or packaging, blueprints, and software.

There are limitations on the scope of copyright protection. First, while registration is not required to secure copyright protection, it is a prerequisite to litigating a copyright claim and is desirable to preserve the remedies for attorney's fees and statutory damages. Second, "[i]n no case does copyright protection for an original work of authorship extend to any idea, procedure, process, system, method of

[1] 17 USC § 102(a).

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_11

operation, concept, principle, or discovery ….”[2] Third, where a “useful article” is concerned, copyright protection is only afforded to the extent the original creative expression is physically or conceptually separable from the utility of the useful article. Finally, only certain subject matter is subject to copyright.

11.2 Scope of Protection

11.2.1 Software and Apps as Copyrightable Matter

Software, computer programs, and apps are considered literary works for the purpose of copyright protection. Copyright protection only protects expressive elements of the program code and cannot be used to protect the functional aspects of the program. For example, methods of operation within the software, such as menu commands, for the most part are not copyrightable unless they are novel or consist of new and original artistic elements. Graphical User Interfaces (GUIs) elements are generally copyrightable. Copyright can also be afforded to both the source code and the object code that make up a program. The author may choose if he or she would like to seek copyright protection for the entirety of the program code or only a portion of the code. Sometimes, graphic displays are used to illustrate the underlying operation of a program’s function. Like schematics, these graphic representations, such as a flowchart or diagram, may be protected under a separate copyright in addition to the software code.

A copyright is created in a work once it is fixed into a tangible medium of expression. For example, a programmer creates copyright protection in the code he or she is developing the moment he or she hits the “save” button, i.e., fixing it in a tangible medium. Obtaining a copyright is essentially “free” since registration of the copyright is not required, but is highly recommended.

As part of the registration process of the code, the author must provide the Copyright Office with a copy of the identifiable portions of the source code, that is, the first 25 pages of code and the last 25 pages of code. If the code is less than 50 pages, then the author must submit the entire code. If portions of the code are to be protected as a trade secret, the code may be submitted with a letter stating that it is a trade secret. In which case, the author must submit the first 25 pages of code and the last 25 pages of code, but the trade secret portions may be blocked out. Both the source code and the object code are copyrightable.

[2] 17 USC § 102(b).

Example of trade secreted programming code blocked out.

```
\\use 50% one-shot finish, updated to 1.5 cool down after patch on 10/28 DC
do {
int [redacted] actionA, actionB;
if ([redacted])
{
actionA=1;
}
else
{
if (cd >1.5)
{
at=1;
cd=T-1.5;
}
else
{
at=2;
cd=T=0.5;
}
}
else
{ …
```

11.2.2 Advertising, Marketing Materials, and Product Packaging

Original authorship is often embodied in advertising, marketing materials, and packaging. The primary issues of concern in these areas are copyright ownership, avoiding infringement, and preserving remedies through registration.

Through registration, a copyright owner preserves its ability to recover attorney's fees and statutory damages, remedies that are not available if infringement commences before registration. The registration process also compels an examination of authorship/ownership issues, as well as necessitating a review of whether

any preexisting material is embodied in a work, which may give rise to a need for obtaining permission for use of such material. Pursuing registration of the copyright in a commercial should raise the issue of identifying all of the "authors" of the commercial and the use of preexisting material, if any. This will normally bring to light the need for appropriate assignments and clearances.

Example Packaging, logos, and labels can be protected under copyright as artistic works. An example of a copyrighted logo can be found in the fashion industry. The Louis Vuitton Multicolore Monogram graphic design used on its line of hand bags is protected by copyright, and Louis Vuitton often enforces the copyright on that design.[3] Similarly, courts have held that the pledge label used on pledge furniture cleaning products is protected by copyright.[4]

To the extent that packaging embodies creative expression, packaging is protectable under copyright. This can extend to the shape of packaging such as a Mickey Mouse-shaped popsicle or a sculpted perfume bottle stopper. Containers are, however, generally useful articles that would be more appropriately protected by patents. For example, the packaging used by Apple to package iPods is patented.[5] In some instances, distinct containers may also be protected under trademark registrations such as the Tiffany & Co.'s signature Tiffany Blue Box.[6]

11.2.3 Training Manuals, User Manuals, and the Like

Training materials, user manuals, company brochures, client alerts, instruction guides, and company handbooks can be copyrightable if they demonstrate the requisite minimal degree of creativity for copyright protection. These types of documents qualify for copyright protection as "literary works." Copyright in such materials is limited to the description of the processes describe in the materials—and does not protect the process itself.[7] For example, if a training manual provides a step-by-step description for how an employee is to procure a reimbursement from the employer company, the written description, along with any flowcharts or

[3]See, e.g., Louis Vuitton Malletier, S.A. v. Mido Trading, Inc., CV 08-04405 DDP (C.D. Cal. April 22, 2010); Louis Vuitton Malletier, S.A. v. Akanoc Solutions, Inc., 2009 WL 1636914 (N.D. Cal. 2009).

[4]S.C. Johnson & Son, Inc. v. Turtle Wax, Inc., 1989 WL 134802 (N.D. Ill. 1989); see also Drop Dead Co. v. S.C. Johnson & Son, Inc., 326 F.2d 87 (9th Cir. 1963).

[5]US Patent No. 7,878,326.

[6]US Registration No. 2,359,351. Owner: Tiffany Co.

[7]Situation Management Systems v. ASP Consulting LLC, 90 USPQ 2d 1095 (1st Cir. 2009).

diagrams, is copyrightable. However, the process itself cannot be protected. Other companies could use the same process to reimburse employees.

Employer companies should be mindful of the need for assignment of IP rights from those employees who produce these kinds of documents are part of their employment. If an employee produces a training module or presentation, or a user manual as a by-product of his or her job, the employer company should make sure that the IP rights to the manual are assigned to the company.

11.2.4 Secret and Other Materials Including Software

In many instances, a business may develop software that is incorporated into high-tech consumer electronics products. To the extent such works contain original expression, they are protected by copyright law. However, as with all works protected by copyright, the underlying methods and procedures are not protected by copyright.

Software owners often want to ensure secrecy and copyright allows such secrecy. When an owner needs secrecy of works such as software source code, it can register the work by providing "sufficient identifying material," instead of the normally required copy of the work. The identifying material may have confidential portions redacted to preserve secrecy.

11.3 Ownership and Authorship

Three simple rules control the initial ownership of copyright. First, in general, ownership of copyright "vests initially in the author or authors of the work."[8] Thus, a person who creates an original work automatically becomes its copyright owner. Second, and a major exception to the first rule, where a work is made for hire, the employer or commissioning party is deemed to be the author. Third, where there is more than one author, "the authors of a joint work are co-owners of copyright in the work."[9]

Although these rules are relatively simple, determining authorship can be difficult. When authors cannot agree on authorship, the Copyright Office will register conflicting claims to copyright in the same work. To avoid such a dispute, it is always best to try to resolve authorship/ownership issues at an early stage, or to avoid any issues with agreements prior to an issue arising. For an employer, employment contracts should be used to define the scope of employment, and any

[8] 17 USC § 201(a).

[9] 17 USC § 201(a).

work being done by independent contractors should be covered by an agreement that assigns any copyrights.

11.3.1 Works for Hire

The Copyright Act in 17 USC § 101 defines:

> A "work made for hire" is —
>
> (1) a work prepared by an employee within the scope of his or her employment; or
>
> (2) a work specially ordered or commissioned for use as … [specific list of types of items] … if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.

Employers need not have an agreement with their employers to create a "work made for hire" obligation. Employment contracts, however, are often useful in settling questions involving whether or not a particular work was prepared within the "scope of employment." Clear policies often avoid problems in this respect. On the other hand, the law requires specially ordered and commissioned works to be identified in writing as "work for hire." Additionally, even if there is a written agreement as to "work for hire" status, only the specifically enumerated types of works are eligible to be considered "work for hire."

11.3.2 Jointly Authored Works

17 USC § 101 of the Copyright Act defines "joint work" as "a work prepared by two or more authors with the intention that their contributions be merged into inseparable or interdependent parts of a unitary whole." The authors of a joint work may be natural persons, persons, or other entities by virtue of "works for hire" or a combination of both where the some contributions are "work for hire" and other contributions are not "works for hire." In the case of multiple employees creating a work for the same employer, there is only one author, the employer, so that such a work is not a joint work.

For works that are jointly owned, unless there is an agreement to the contrary, any joint owner is free to exploit the copyright in the entire work. The other joint owners, however, have a right of contribution to the profits made from the exploitation of a work.

11.4 Licensing and Assignment of Copyrights

After initial ownership of copyright is established through authorship, copyrights may be transferred. The law requires a writing, however, to assign a copyright. 17 USC § 204(a) provides:

> A transfer of copyright ownership, other than by operation of law, is not valid unless an instrument of conveyance, or a note or memorandum of the transfer, is in writing and signed by the owner of the rights conveyed or such owner's duly authorized agent.

Proper recordation of copyright assignments with the Copyright Office should be made to perfect title to copyrights. The requirement for a writing under 17 USC § 204 does not extend to copyright licenses. Accordingly, there can be oral and implied copyright licenses. Recordation of license rights is not required. In the case of works not made for hire, both assignments and licenses can be terminated after 35 years.[10]

11.5 Derivative Works

One of the informational requirements in registering copyright in a work is to identify preexisting copyrighted material that is present in the copyright application. This is important for registration purposes because copyright in a derivative work is limited to the newly added material; the preexisting material is protected by its own prior copyright. To the extent a work "unlawfully" uses preexisting material, the law may invalidate copyright protection.

Example Fanfiction is a popular form of writing where fanatics of a popular TV series, book, or anthology of films write original stories incorporating elements from the source material such as characters, settings, or situations from the TV series, book, or films. Fans usually will take their favorite characters from the original source material and engage those characters in alternate or new adventures. Although fanfiction is legally a derivative work, distributing fanfiction to others, for example, through a fan Web site, is a violation of the original author's copyrights. While fanfiction is often intended as tribute, it is illegal without permission from the original content's author.

[10] 17 USC § 203.

11.6 Fair Use

The Copyright Act permits certain copying under the doctrine of fair use. The Copyright Act defines a "fair use" balancing test in 17 USC § 109 that provides:

> …the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include —
>
> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
> (2) the nature of the copyrighted work;
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
> (4) the effect of the use upon the potential market for or value of the copyrighted work.
>
> The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

What does and does not constitute "fair use" is often subject to debate, and, therefore, a lot of litigation. A good rule of thumb is that if you would object to someone copying your work, you may not want to copy without consulting an attorney. A few examples of what may constitute fair use include the following:

- Small excerpts in a review or criticism for purposes of illustration or comment;
- A parody which incorporates some elements of the work being parodied;
- Quotations from a speech in a news report; and
- Limited copying for use by a student for educational purposes.

Where there is an intention to use a significant portion of another person's work, it is generally advisable to obtain permission or a license. For music, the Copyright Act provides for compulsory licensing. For major projects, clearance activity may entail contacting multiple parties from collective rights groups such as the Copyright Clearance Center, the American Society of Composers, Authors and Publishers (ASCAP), and Broadcast Music Inc. (BMI) to track down individual authors.

11.7 Registration Issues

Copyright registrations provide an invaluable source of information about copyrighted works and aid in the preservations of works and enhancement of the Library of Congress's collection. Moreover, for copyright owners, the registration process provides a valuable procedure to compel an examination of the issues of copyright ownership and the use of third-party materials. Copyright registration is a

deceptively simple procedure that leads to questions of authorship and ownership. Registration of copyright preserves important remedies, including statutory (mandatory) damages and attorney fees; in fact, a plaintiff cannot even bring a copyright action without a copyright registration.

Chapter 12
Intellectual Property Issues in Labeling and Marketing

Abstract Apart from whether a mark can be protected under the trademark law, there may be government regulations that can restrict or prohibit use of the mark in advertising or labeling any product(s) with the mark. Anyone using or selecting a trademark as a startup should be aware of the nature and kind of regulations that may be applicable to their product. The rules vary from state to state, and there are different rules that apply to labeling and marketing outside of the USA. Startups need to be aware of what labeling and marketing rules apply to their business in order to avoid potential fines, penalties, or litigation.

12.1 Government Controls Over Advertisements and Labeling

The production, marketing, distribution, import, export, and sale of high-tech consumer electronics and computer software products in the USA are subject to government regulations on both the federal and state levels.

12.1.1 Federal Trade Commission

The FTC is responsible for maintaining a competitive marketplace for both consumers and business and preventing unfair or deceptive trade practices. As such, it administers laws and regulations ranging from the content of clothing labels to laws requiring truth in advertising and prohibiting price fixing.

The FTC regulates advertising under its statutory authority to prohibit deceptive acts or practices. The FTC will find an advertisement deceptive:

1. if it contains a representation or omission of fact,
2. that is likely to mislead consumers acting reasonably under the circumstances, and
3. that representation or omission is material.

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_12

The first step in the analysis is to identify representations made by an advertisement. A representation may be made expressly or implicitly. An express claim directly makes a representation of fact. An implied claim is not so straightforward and requires an examination of both the representation in order to determine the overall meaning or commercial impression of an advertisement. False claims can also stem from an omission of information, which makes an affirmative representation misleading. In other words, it can be deceptive for a seller to simply remain silent if such silence constitutes an implied, but false, representation.

The second step in identifying deception in an advertisement requires the commission to consider the representation from the perspective of a consumer acting reasonably under the circumstances.

Finally, a representation must be material, i.e., likely to affect a consumer's choice or use of a product or service. Express claims involving health, safety, price, or efficacy are presumed to be material.

Any claim by an advertiser must have a reasonable basis. Where compliance claims are made (i.e., Energy Star compliance or European Conformity markings), those claims should normally be substantiated by competent and reliable scientific evidence such as tests, analyses, researches, studies, or other evidence conducted and evaluated in an objective manner by persons qualified to do so, using generally accepted scientific methods.

The FTC also monitors and reports on industry practices regarding the marketing of violent movies, music, and electronic games to children; provides guidelines regarding US origin claims placed on product packaging; and provides guidelines on the use of environmental marketing claims, or the marketing of "green" products.

12.1.2 State Regulation

Individual states within the USA also regulate labeling and advertisements. Many activities, but by no means all, relating to labeling are preempted by federal laws and regulations promulgated by the FTC and other agencies. The strength of state power lies in each state's consumer protection laws, which seek to prevent deceptive trade practices. Since the penalties for violating these laws can be severe in some cases, individual states can have a great influence on regulating advertising of products.

States can also regulate how consumers dispose of their electronics. For example, some states have enacted laws that prohibit disposal of consumer electronics in state landfills and have instituted state-regulated electronics recycling programs. Of note are laws such as "Producer Take Back laws," which require manufacturers of certain electronic devices to take back particular types of old electronics that they were responsible for selling in the first place. Startup companies should take care to ensure that they do not run afoul of the laws.

12.1.3 Government Controls Abroad

Regardless of one's knowledge of US labeling laws and regulations, these laws and regulations are only valid within the jurisdiction of the USA. If a consumer electronic device or computer software is intended to be exported, the labeling requirements of the import country must be identified and followed. Furthermore, the US Bureau of Industry and Security has policies and regulations for the export of dual-use commodities (dual-use items are predominantly for commercial uses, but also have military application), software, and technology.

By way of example, the European Union (EU) requires the European Conformity (CE) marking be affixed to any product subject to it before the product is to be placed on the market in the EU. Similarly, the EU, China, and Japan each require markings on products that consist of certain hazardous substances (Restriction on certain Hazardous Substances or "RoHS") to indicate compliance with every countries' RoHS standards.

12.1.4 Patent Marking

A recent amendment to the patent law, entitled the America Invents Act (AIA), has changed the manner in which products may be marked with patent numbers. The purpose of placing patent numbers on a product is to put purchasers on notice as to what patents protect the product. Marking serves as "constructive notice" to potential infringers. The AIA amended 35 USC § 287(a) to allow products to be "virtually marked." Marking with "patent" or "pat." and "an address of a posting on the Internet, accessible to the public without charge for accessing the address, that associates the patented article with the number of the patent" is now a permissible form of notice.

Example Under the AIA, a company's product could be virtually marked in any of the following ways:

Patents: http://www.companyname.com/patents
Patents: http://www.companyname.com/patentnotice
Patents: http://www.companyname.com/legal/patent

Prior to the adoption of the AIA, any individual could bring a lawsuit on behalf of the USA in what is called a qui tam action, for "false patent marking," where products were marked with expired patent numbers. The AIA introduced 35 USC § 292(c), which effectively eliminates any causes of action based on marking products with expired patent numbers.

12.2 Non-government Controls

Many industries have trade associations that may have a code of conduct governing advertisements of their products. However, any such code of conduct is effectively non-binding on members. Moreover, if the code of conduct limits information provided to consumers (e.g., in the event of truthful competitive advertising), it could be considered anti-competitive and subject to challenge by the FTC. Examples of this would be an industry code of conduct that imposes a higher standard of substantiation for comparative claims than for unilateral claims.

Alternatively, false or misleading statements can be brought before the National Advertising Division ("NAD") of the Better Business Bureau (www.nadreview.org). In an action before the NAD, a competitor may file a complaint to take action against false or misleading statements, while avoiding the distractions and expense of full-blown interparty litigation or involvement with a government agency. After a complaint is initiated and accepted, the NAD will investigate the matter, and if a deceptive or misleading practice is found, it will take action which can range from requesting corrective advertising from the publisher, publication of the NAD's findings, or referral to a regulatory authority such as the FTC for further penalties.

12.3 Comparative Advertising

Comparative advertising refers to identifying a competitor's product by its trademark and comparing it to the advertised product. Comparative advertising is widely used in the technology, computer software, and startup industries to convey valuable information to consumers. However, using such comparative advertising runs the risk that a competitor could take action either that the claims are false or that the advertisement infringes the competitor's trademark rights.

The FTC and courts have approved the use of brand comparisons where the bases of the comparison are truthful, objective, and clearly identified. Advertisements containing truthful and non-deceptive statements that a product has certain desirable properties or qualities that a competing product does not possess are permitted. However, false or misleading comparative advertising can trigger liability for false advertising or trademark dilution. Therefore, when a competitor's trademark is used in comparative advertising, the statements used must not have a tendency or capacity to confuse or be considered to be false or deceptive.

In order to lessen the risk of litigation arising from comparative advertisement, the steps outlined below should be considered before making any claims regarding a competitor's product.

- Only use the competitor's trademark to the extent necessary for comparison purposes.

- Use the competitor's trademark in the same way that the text is used throughout the advertisement. In other words, do not place emphasis on the competitor's trademark that would lead a consumer to believe that the trademark is associated with the advertiser's company.
- Do not disparage or mock the competitor or the competitor's trademark in the advertisement. Make sure any photographs of a competitor's product are accurate and do not place the product in unfavorable light. In addition, do not use any photographs of a competitor's product that may be copyrighted by a competitor or a third party. Instead, use original photographs.
- Try to make sure your product's advertisements, packaging, and trade dress create a separate commercial impression from those of your competitor. In other words, a consumer looking at the two products or advertisements should not believe that the products are somehow related because of similarities in colors, fonts, stylization, etc.
- Include an easily visible disclaimer in any advertisement that uses the competitor's trademark. An example of such disclaimer is, "COMPETITOR'S TRADEMARK is a trademark of COMPETITOR. ADVERTISER does not make or license COMPETITOR'S TRADEMARK and is not affiliated or associated with Competitor."
- Verify that any statements regarding competitor or advertiser's product are true both explicitly and implicitly. The following steps should be taken:
  - Retain a certified, independent, and well-respected laboratory in the industry to perform the testing. Verify that the testing to be performed is the test generally accepted by technical or scientific community.
  - Make sure testing is fair and impartial. For example, ensure that the appropriate comparative products from the competitor's product line are compared.
  - Testing should support all statements made regarding a competitor's product.
  - Make sure copies of the test methodology, test results, and samples tested are preserved in a safe place in case the tests have to be repeated at a later date.

Even if all the above suggestions are followed, there is nothing that can be done to prevent a party that feels it has been harmed from deciding to bring a court action to protect its rights. It is recommended to consult legal counsel regarding individual advertising claims before a comparative advertising campaign is launched.

Chapter 13
Enforcement and Infringement of Intellectual Property Rights

Abstract Not only is it important for startups to obtain intellectual property rights, but they must also actively monitor for infringement of those rights, and seek enforcement of their IP rights. Startups must police the market and the activities of others and take steps to prevent, avoid, mitigate, and enforce their rights. There are a variety of causes of actions that a startup might have, including misappropriation of trade secrets, patent or trademark infringement or trademark dilution. These matters can be resolved in a number of different ways, such as through mediation, licensing agreements, royalty payments, or litigation. Startups need to carefully considered how best to monitor their intellectual property rights, and how to handle any problems that might arise concerning those rights.

13.1 Policing Your IP Rights

After a startup company invests the time and resources into developing and protecting its intellectual property rights, it is important to police the market to ensure that no competitors are improperly benefiting from such intellectual property investments. Policing of intellectual property rights can be broken down into a four (4) step process:

(1) The rights must be identified by class: trademark, trade secret, copyright, or patent. It is also important to remember that any single right may be protected by more than one type of intellectual property protection. For instance, a patent or trade secret right may have an associated trademark, or there may be copyrightable materials that accompany distribution of the patented item. Copyrighted instructions may be an important element in the commercialization of a trade secret. Consider the sale of a trade secret formula where the temperature, rate of mixing, and amount of the intermediary is critical to its performance in the end product. While the owner of such information would not want the disclosure to reveal the trade secret, the copyrighted instructions could be an important sales tool because it may be the only way to make the

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formula commercially useful to the customer. This identification process should be conducted carefully to consider all possibilities for protection.

(2) The protection of intellectual property rights identified through the prior analysis will require consideration of the competing marketplace of interest. If the identification step yields a product having commercial interest that is potentially patentable and marketing has identified or developed a trademark for the product, there are competing interests associated with the different forms of protection. On the one hand, the patent interest requires diligence to be sure that the invention is not disclosed or sold more than one year prior to applying for the patent. On the other hand, trademark rights are based on use and there is a desire to initiate commercial use of the mark in association with a product as soon as possible. As noted in the trademark chapter of this book, it is possible to file an "Intent to Use" trademark ("ITU") application before there is any disclosure of the invention or use of the trademark. There is a similar procedure, known as a provisional patent application, which can be filed to preserve a patent application filing date prior to any disclosure. Use of these two vehicles permits the preservation of patent and trademark rights while efforts are undertaken to gauge the market's commercial interest. This relatively simple solution to the potential problem is made possible through diligence in the identification of the concerned rights and remaining mindful of the critical first date of the underlying right.

(3) Vigilance in the marketplace is a critical component of intellectual property management. Market vigilance is the key to gathering information about competitive practices and products. This information is useful both for the detecting infringement of rights and for avoiding infringement of third-party rights, i.e., the rights held by others. With respect to the issue of detecting infringement, the intellectual property owner is charged with a certain level of vigilance and long delays in detecting an infringement may result in an infringer having an equitable defense against the assertion of the infringed intellectual property right. Thus, you cannot sleep on your rights to the detriment of another. Conversely, one cannot count on ignorance of another's rights as a complete defense to a charge of infringement. As a general rule, a startup must act in a reasonably prudent manner with respect to its own rights and the rights of another. Frequently, a sales force or distribution network is an excellent source of competitive information. These individuals continuously interface with customers and interact in the marketplace and are generally aware of competitors' products and services. While the law does not require the engagement of an investigator to search out all possible infringements, it does require an increased level of vigilance once there is a reason to believe there is an infringement.

(4) Enforcement is the end result of properly conducting the above steps and identifying an infringer. Enforcement is a process that should not be taken lightly, as it can have consequences for rights being asserted and consequences for the business entity itself. Once an infringer is discovered, there are steps that need to be taken for the purposes of evaluating the infringement and the

impact on the business of the intellectual property owner. In other words, knowledge of an infringement carries with it the requirement of action or at least an informed decision not to take action. The steps needed for the purposes of evaluating the infringement, and the impact on the business of the intellectual property owner should be followed in either case.

13.2 Evaluating a Controversy Before Commencing Litigation

A number of inquiries should be made prior to the commencement of filing a lawsuit to enforce intellectual property rights. First, an initial assessment should be made as to whether the intellectual property right can be enforced. This involves identifying the right and checking its validity and enforceability. This evaluation needs to be made even when all steps have been taken to obtain a valid enforceable right, in order to ensure that the right has maintained its enforceability. For example, a patent may have lapsed for failure to pay maintenance fees and will no longer be enforceable under this scenario. Likewise, a trademark that has become abandoned (i.e., the owner is no longer using the mark and has no intention of resuming use) is no longer enforceable. In cases where an intellectual property right has been lost or becomes unenforceable, in certain instances it can be regained or made enforceable again. For example, a patent that has lapsed for failure to pay maintenance fees may be reinstated up to two (2) years after the lapse if it can be shown that the delay in payment was unintentional. With any intellectual property right, a review should be conducted to ensure that nothing has occurred to cause the right to cease being enforceable, and if it is found that such an event has occurred, a further check should be made to identify whether any steps can be taken to reinstate the right.

All elements of a legal cause of action must be present for successful enforcement. This evaluation is different for each type of intellectual property right.

- For a patent, the evaluation involves asking whether an allegedly infringing device meets each and every limitation of one or more of the patent's claims.
- For a trademark, the evaluation involves asking whether there is a likelihood of confusion between the asserted trademark and the allegedly infringing mark.
- For a copyright, the evaluation involves asking whether there was an actual copying of the work or a portion of the work and whether there is any evidence that the infringer has access to the copyrighted work.

With any cause of action, the first step is a check of whether all the elements of the potential claim can be satisfied.

It is always necessary to make a risk–benefit analysis of the economic impact of any potential litigation. Litigation can be costly, and the potential cost of a lawsuit is often difficult to predict. The American Intellectual Property Law Association

recently published a report that found that legal fees in patent litigation could be $600,000 where one million dollars was at stake, and $2 million or more where more than one million dollars was at stake.[1] The estimated litigation cost should be weighed against the damages sought, and the probability of actually obtaining such an amount. It should be kept in mind that in many cases, remedies other than monetary damages may be awarded. A valuation of all potential remedies should be made. For example, if an injunction to stop an infringement is the main relief sought, an analysis of the value imparted to the intellectual property owner by the cessation of the infringing behavior needs to be made before any action is taken. Litigations can be extremely disruptive to an organization. Accordingly, the analysis should include the non-monetary costs of the time and energy that litigation takes away from the normal business operations.

13.3 Remedies

13.3.1 Injunctions

An injunction is an order by a court to the infringing party that orders them to stop an infringing action. For example, in the case of an injunction for a product that infringes a patent, the court may issue an injunction to immediately stop sales of an infringing product, or to cut off the sale of an infringing service. An injunction is a remedy that is available in most intellectual property lawsuits, especially patent and trademark lawsuits. Injunctions can be sought in addition to monetary damages. As disclosed in more detail below, an injunction may be permanent or preliminary (temporary).

A party seeking permanent injunctive relief must demonstrate by competent evidence that:

(1) It has suffered an irreparable injury;
(2) Other remedies available at law, such as monetary damages, are inadequate to compensate for the injury;
(3) The balance of hardships between the plaintiff and defendant warrants the granting of an equitable remedy; and
(4) The injunction will serve the public interest.

Although permanent injunctions are more common in intellectual property lawsuits because monetary damage amounts are often difficult to ascertain, they are not considered to be automatic upon a finding of infringement. Injunctive relief in an intellectual property matter must meet the same four (4) elements noted above.

[1]American Intellectual Property Law Association, *AIPLA Report of the Economic Survey 2015*, American Intellectual Property Law Association (2015).

13.3.2 Payment of Royalties

One possible remedy for patent, trademark, or copyright infringement is an order that the infringer must pay the intellectual property owner a reasonable royalty. The court may determine what constitutes a reasonable royalty and order payment for past infringement, and, in certain cases involving public interest, order that royalties be paid for the future use of another's intellectual property right. An order for payment of reasonable royalties may be desirable where the actual damages are difficult to evaluate. Courts will often engage in a weighing of the harms when determining an appropriate remedy in intellectual property cases and avoid awarding a remedy that will impose an undue burden on the infringer, particularly where the infringement was innocent. In some cases, courts will give an innocent infringer an option between an injunction and an order to pay reasonable royalties until such time as the infringer phases out the use of the owner's intellectual property without suffering excessive damage.

Example In 2009, Carnegie Mellon University sued Marvell Technology Group Ltd. claiming that Marvell was selling chips that infringed on two patents held by the University. Marvell counter claimed that the patents were invalid. The case was heard by a federal jury in Pittsburg, Pennsylvania in late 2012. The jury returned a verdict in favor of Carnegie Mellon, finding that the patents were valid and that Marvell had literally and willfully infringed the University's patents. The jury also made a damages award of $1.17 billion to the University. This award was based on a reasonable royalty of $0.50 for every infringing chip Marvell sold worldwide since March 6, 2003. The $1.17 billion award is one of the largest verdicts ever granted. Marvell filed several post-trial motions including a challenge to how the damages were calculated and a motion for a mistrial, and ultimately appealed the case.

The Court of Appeals for the Federal Circuit took up the case in 2015, and upheld the jury verdict concerning the payment of royalties to Carnegie Mellon, but reversed the enhancement of damages because damages can only be granted when infringing products are sold, made, or imported into the USA.

13.3.3 Monetary Damages

Monetary damages can be difficult and expensive to prove in intellectual property litigation because it is often difficult to ascertain the actual loss attributable to, and incurred, as a result of the infringing behavior. An investigation should be made to determine what damages were incurred, and if they are recoverable. For example, in

a suit for trademark infringement, the trademark owner may seek damages for loss of goodwill resulting from the infringement, but measuring those damages can be difficult and involve surveys and experts that may push the costs beyond what is recoverable.

In certain cases, such as infringement of a registered copyright, the owner of the copyright may be entitled to statutory damages without the requirement of proving actual damages if the statutory requirements are met. The copyright statute provides, upon election by the copyright owner that the court may award anywhere from $750 to $30,000 for each work infringed upon and may further increase the award per infringement up to $150,000 for willful infringement.

13.4 Settling Controversy Without Litigation

13.4.1 Arbitration

Arbitration is a non-judicial form of resolution where the parties select an arbitrator or panel of arbitrators who hear evidence and decide the matter. The proceeding is similar to, but not as formal or nearly as expensive, as a court trial. The parties can agree that an arbitration award can be binding and enforceable in court and appeals may be permitted.

Arbitration offers various advantages over litigation, and several particular advantages unique to resolution of intellectual property disputes. Arbitration presents the opportunity to have a dispute settled in a more expedient manner than conventional courtroom litigation. Litigation of cases involving intellectual property issues can be long, tedious, and complex. Arbitration may shorten the dispute process, and, because of the shortened time frame and limited need for discovery, reduce the costs compared to those typically associated litigation.

One particular advantage of arbitration with respect to settlement of patent disputes lies in the fact that the arbitrator is chosen by the parties, permitting selection of an arbitrator having a technical background that will facilitate understanding of the patented subject matter. In 1983, the United States Patent Act was amended to provide for the voluntary settlement of patent disputes by binding arbitration.

Example In early 2012, STMicroelectronics and NXP Semiconductor Netherlands BV entered into arbitration proceedings organized according to rules set forth by the International Chamber of Commerce. A claim was asserted against STMicroelectronics for underloading charges associated with the price of wafers that were supplied by NXP to STMicroelectronics's wireless joint venture during the period spanning between October 2008 and December 2009. The arbitration proceeding resulted in a ruling by which

STMicroelectronics was ordered to pay $59 million to NXP Semiconductor. Additionally, the tribunal reserved certain issues raised by STMicroelectronics to be addressed by a second arbitration proceeding scheduled for June of 2012, with final resolution by June of 2013.

13.4.2 Mediation

Mediation can be an effective means of settling a dispute more quickly and at a lower cost than litigation, but it is very different from arbitration. The mediator functions differently than a judge, jury, or arbitrator by working with the parties to assist in a negotiated agreement that satisfies the interests of all without any determination of who is right or wrong.

Settlement of disputes by mediation offers several practical advantages. Litigation costs, such as discovery and motion practice, can be greatly reduced or eliminated. Another significant advantage is the abbreviated time lapse between commencement and resolution of the dispute, particularly due to the elimination of appeals, which can draw out the litigation process. This is of particular importance in the context of patent litigation, where the right could expire or the technology involved could potentially become obsolete before the dispute is resolved. In addition, parties using mediation for dispute resolution avoid the risk of a complete loss on all counts, and, hopefully, negotiate a resolution that favors the continuation of the business interests of the party.

Mediation can be particularly valuable in resolving disputes over intellectual property rights because it offers the parties an opportunity to come to a negotiated resolution that is unlikely to be obtained in court. Agreements may be reached that allow all parties to exercise an intellectual property right with minimal intrusion on the rights of the other parties. For example, in a dispute over trademark rights, the parties may come to an agreement where each agrees to keep limited use of the trademark, such as by confinement to a particular geographic boundary.

13.4.3 Licensing Agreements

Licensing agreements are often a good way to circumvent litigation, mediation, and arbitration. A licensing agreement is a contract that the parties enter into where the property right holder grants permission for the infringer to use the intellectual property going forward in exchange for something in return. The infringer becomes a licensee.

The license can place limitations on the licensee, such as requiring the licensee to pay for use of the intellectual property rights, prohibiting the licensee from

modifying the intellectual property, or limiting how the licensee may use the intellectual property. Many infringers who are faced with the choice of a lawsuit or taking a license, opt for the license as it is often the more affordable choice.

13.5 IP Litigation

In cases where there is no other solution, litigation may be the necessary means to resolve the dispute.

13.5.1 Selecting a Jurisdiction

Intellectual property lawsuits may be brought in either the state or federal courts. The court used can be dependent on the issue and the authority for the asserted property right. Since trade secret rights most typically arise under state law, those suits are most common in state courts. Patent and copyright disputes are both the subject matter of federal statutes that invoke a federal court jurisdiction. Trademark rights may arise under state or federal law and the authority for such rights will determine whether the suit should be brought in state or federal court. Although most cases involving patent and copyright issues will be brought in federal court, there are exceptions where an intellectual property issue arises collaterally with a state law matter such as interpretation of a license or contract.

In addition to determining whether state or federal court is the appropriate place to bring suit, the defendant must reside in or do business within the state where the suit is brought.

13.5.2 Causes of Action

Infringement

Infringement actions are the most common type of litigation involving patents, trademarks, and copyrights. An infringement lawsuit may be brought for either direct or contributory infringement. In a lawsuit brought for direct infringement, the party allegedly engaging in the infringing activity is named as the defendant.

For patents, infringement results from making, using, selling, offering to sell, or importing into the USA an invention within the scope of the patent claims without the patent owner's permission. For trademarks, infringement results from the unauthorized use of the same mark or a mark that has a likelihood of creating confusion between that mark and the plaintiff's mark. For copyrights, infringement results when the infringer had notice of, or access to, the copyright work and engaged in actual copying of all or part of the copyrighted work.

In some circumstances, the infringement may result from activity that is not directly infringing, but it encourages or enables infringement by a third party. In these cases, the intellectual property owner may bring a lawsuit against a party for inducing or contributory infringement (i.e., indirect infringement). Such causes of action for indirect infringement can be based upon various activities. For instance, the defendant may be making or selling product that is intended for an infringing use or is sold with instructions that provide directions for another to infringe. This situation is common in both the patent and copyright contexts. In either situation, it may be undesirable to file suit against the direct infringers as there may be a large number of defendants or the defendants may be customers, and the direct infringers are typically less likely to have recoverable funds than the indirect infringer.

Indirect infringement frequently arises where a patent contains only method claims. Someone making or selling a product that does not itself infringe the patent claims may encourage its use in a way that does infringe the claimed method. The patent owner may not be able to sue the maker or seller for direct infringement of the method, but could sue the maker or seller for indirect infringement if those activities induced others to infringe, or contributed to others infringing a patent.

Declaratory Judgments

A party having a real interest to capitalize on subject matter that is alleged to be covered by another party's intellectual property right may file suit seeking a "declaration" by the court that there is no infringement of the intellectual property right in question, the right in question is invalid, or that the right in question is not enforceable. This is known as a declaratory judgment action.

The decision to seek a declaratory judgment requires serious thought. The owner of the rights in question may not pursue the potential infringement based on its own policy reasons, or may no longer have a sufficient commercial interest in them to expend the costs to pursue litigation. Thus, any decision to file a declaratory judgment action must under go the same analysis applied to any other litigation.

Trademark Dilution

Trademark dilution originated as a state law cause of action pertaining to common law trademark rights. In 1995, it was codified in the Federal Trademark Dilution Act and made applicable to federally registered trademarks. Dilution actions can only be brought by owners of famous marks. To make out a cause of action, the plaintiff must show that the defendant adopted the use of a mark that tends to dilute the distinctive quality of plaintiff's famous mark. If such a showing is made, the plaintiff can obtain an injunction against the defendant's use of the mark, even absent a showing of likelihood of confusion.

Misappropriation of Trade Secrets

To bring an action for misappropriation of trade secrets, a plaintiff must show the existence of a trade secret, and that the defendant misappropriated the trade secret.

Under the Uniform Trade Secrets Act (UTSA), which many states follow, a trade secret is any information having independent economic value due to its nature and the fact that it is not commonly known, for which reasonable efforts are made to maintain secrecy. Misappropriation occurs where the defendant either acquired the information by improper means, or received the information with knowledge that it was derived by improper means or disclosed in breach of a duty to keep secret. Trade secret law does not take the "strict liability," approach of patent and trademark law, and requires some wrongful behavior on the defendant's part in order to impose liability. It should also be kept in mind that a party who "reverse engineers" the trade secret cannot be held liable for misappropriation of trade secrets, as this is not considered an "improper means."

13.5.3 Preliminary Injunction

Seeking a preliminary injunction at the outset of the litigation may be desirable to prevent further infringement during the proceedings. Such an injunction is temporary and is typically only awarded upon a showing that the plaintiff has a strong likelihood of success on the merits, along with the potential to suffer irreparable injury if the allegedly infringing activity is permitted to continue during the proceedings. This can be a difficult burden for a plaintiff, particularly in intellectual property lawsuits where the court is often charged with detailed factual evaluations or subjective multifactor tests. Nonetheless, a case can be presented that warrants a preliminary injunction in order to mitigate damages.

13.5.4 Discovery Stage

Discovery is a highly important phase of intellectual property litigation and its focus will vary depending on what type of intellectual property right is at issue. This is a time period where both sides of a dispute ask for, and are required to provide, information to the opposing party. The Federal Rules of Civil Procedure govern intellectual property proceedings in federal court, while state rules will govern those cases that are brought in state courts.

Depositions, interrogatories, requests for admissions, and document requests are all available as discovery tools in intellectual property litigation. The Federal Rules of Civil Procedure provide for discovery of "any non-privileged matter that is relevant to any party's claim or defense."[2]

[2]Federal Rule of Civil Procedure 26(b).

13.5.5 Summary Judgment

Motions for summary judgment can be an efficient means for bringing litigation to an early conclusion. Federal Rule of Civil Procedure 56(c) states that a party is entitled to summary judgment where "the pleadings, the discovery and disclosure materials on file, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law."

Having a motion for summary judgment granted can be challenging in intellectual property cases where a large number of complex issues are often present and the evidence may be subject to different interpretations. One example is the case in which a defendant moves for summary judgment holding that the plaintiff's intellectual property right is invalid or unenforceable. While there are some instances where the controlling law is so clear that there is no factual dispute, this is fairly rare. Most issues frequently involve the need for testimony and an evaluation of credibility by a fact finder. Although a grant of summary judgment may be difficult at times, it may be desirable as a means of framing the issues in an effort to expedite the proceedings.

13.5.6 Trial

The trial phase of litigation can be long and expensive in both time and money. The more issues and the more complex the issues are, the longer the trial is likely to take. Patent and trade secret cases can have lengthy trials due to the need to educate the fact finder on the technology at issue. Trademark and copyright trials can also be time-consuming; however, some of these cases can involve simple issues that are easily comprehended by the fact finder.

Experts are especially important in intellectual property litigation, particularly in trade secret and patent litigation where complicated technological issues are likely to be present. An expert witness in a patent case may be needed to testify as a "person having ordinary skill in the art." An expert can also help by assisting the judge and jury in gaining an understanding of technology involved in the case. Experts are also frequently used in the economic area to establish or refute damages.

13.5.7 Costs

Some statutes make attorney's fees and costs available as remedies to intellectual property owners involved in litigation. The Patent Act and Trademark Act both make attorneys' fees available in "exceptional cases." The Copyright Act permits a court, in its discretion, to award litigation costs including attorney's fees to the

prevailing party. Courts usually interpret each of the provisions as applying to cases where willful infringement has been found. US courts do not routinely grant fee shifting awards and litigation should not be viewed as a "loser pays" situation.

13.6 Proceedings in the United States Patent and Trademark Office

13.6.1 Trademark Oppositions

A trademark opposition is an interpartes (meaning "between the parties") proceeding that may be requested by any party who believes there is a potential to be damaged by the registration of a trademark. After a trademark application is examined and found allowable, the United States Patent and Trademark Office publishes the mark in its *Official Gazette* to put the public on notice of the potential registration of the mark. A potential opposer has thirty (30) days from the date of publication to file an opposition or request an extension of time for filing an opposition. Typical grounds for filing an opposition include likelihood of confusion with the opposer's mark, genericness or descriptiveness, abandonment, and fraud.

After an opposition is filed, the trademark applicant/owner responds by filing an answer asserting any defenses. Frequently, the answer to an opposition will assert a counterclaim to cancel a registered mark of the opposer, which forms the basis of the opposition. The opposition proceeding is held before the Trademark Trial and Appeal Board. This is an administrative panel, rather than a judicial panel, with expertise in trademark matters. The proceeding is conducted similar to a federal court proceeding, but is less formal. The PTO proceeding concludes with a Board decision either refusing the registration or permitting the pending registration to go forward to registration. The losing party may appeal the Board's decision to the US Court of Appeals for the Federal Circuit. The denial of a registration does not mean that the mark cannot be used. The right to use the mark requires a judicial determination; however, the results of an opposition can often lead to a settlement between the parties.

13.6.2 Patent Post-grant Review Proceedings

When a party believes that a patent is invalid and never should have been issued as a patent in the first place, the party can seek review of the patent in question through a post-grant review proceeding. The post-grant review options include patent reexamination, post-grant review, and interpartes review.

A reexamination may be ordered at any time after a patent has been granted. Anyone, including the patent owner, may file a request for reexamination, which

shows the existence of a substantial new question of patentability. Reexaminations are most frequently requested in two situations. First, a competitor or potential infringer seeks to have a patent invalidated and removed from the commercial arena. Second, the patent owner wants to enforce the patent, but has concerns about the patent's validity. Reexamination may resolve that issue, and it has the potential to strengthen the patent by bringing the additional prior art not applied during the examination to the attention of the United States Patent and Trademark Office.

Post-grant review is a trial proceeding that is conducted by the Patent Trials and Appeals Board that reviews the patentability of patent claims. Third parties can file a petition for post-grant review of an issued patent within nine (9) months of the patent being issued by the United States Patent and Trademark Office. It must be shown that it is more likely than not that the claim or claims of the patent that are being challenged are unpatentable.

Interpartes review is another type of trial proceeding that is conducted by the Patent Trials and Appeals Board that reviews the patentability of patent claims. Third parties can file a petition for interpartes review of an issued patent within nine (9) months of the patent being issued by the United States Patent and Trademark Office or within nine (9) months of the conclusion of a post-grant review proceeding. It must be shown that there is reasonable likelihood that the petition would prevail with respect to at least one challenged claim.

Part III
Implementation of IP Strategies for Startups

Chapter 14
Successful Implementation of a Startup's IP Strategy

Abstract Once a startup has acquired some intellectual property rights, the startup needs to determine the best way to successfully implement their IP strategy. Startups need to take steps to protect against the loss of their intellectual property rights, which could mean that the startup needs to use non-disclosure agreements and assignment agreements. By educating employees as to the importance of protecting the company's IP, maintaining accurate and detailed records about each piece of the IP and the steps that are being taken to protect it, and conducting due diligence and policing existing rights, startups can successfully implement an intellectual property strategy that is right for them.

14.1 Talk with an Intellectual Property Lawyer

As the facts and circumstances surrounding product development and branding vary widely, consulting with an intellectual property attorney is highly recommended.

Example Virtually, all major corporations who utilize and value the IP rights have an in-house counsel that specifically practices IP law. If a company does not have an in-house counsel, the company certainly seeks an IP counsel externally. Sony, Google, Microsoft, Red Hat, Riot Games, VMware, DISH, Comcast, Yelp, Texas Instruments, Intel, and Amazon are just a handful of examples of companies that have an IP counsel on staff. Even the USPTO has general IP counsel. Whether your company is just starting up, is small but growing, or is fully established and highly successful, consulting IP counsel is important for protecting your company's intellectual property rights.

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14.2 Confidential Disclosure or Non-disclosure Agreements

Confidential Disclosure Agreements, which are also referred to as Non-Disclosure Agreements or NDAs, refer to a contract that protects confidential or trade secret information ("Confidential Information") from disclosure to third parties. NDAs are commonly included as a part of an employment contract and are also included in, or form, a separate agreement with vendors, contractors, and sometimes customers.

An NDA should include the following provisions:

a. A clear definition of the information that is to be held in confidence, as well as a provision defining how the information should be marked or identified, for example, with a "Confidential" stamp or label. Employment agreements typically adopt broader definitions requiring employees to maintain any work-related information that the employee develops or has access to as confidential. Supplemental agreements for specific employee development projects may also be used to more clearly identify the information that is subject to the agreement.
b. A specific recitation of the limited purposes for which the Confidential Information can be used. For example, in an NDA with an outside vendor, the Confidential Information may be provided for specific testing and evaluation of a product, such as RF transmitter and receiver calibration testing or debugging of a software application or game. For an advertising or marketing agency, the Confidential Information could be limited to the specific purpose of package development, branding, or other specific marketing tasks for the benefit of the disclosing party.
c. A recitation that the receiving party cannot breach the confidential relationship, induce others to breach it, or induce others to acquire the Confidential Information by improper means.
d. A recitation of exceptions to the confidentiality requirements. This generally will exclude any information that:
    (i) The receiving party can show they were already in possession of at the time of the disclosure;
    (ii) Information that is in the public domain through no fault of the receiving party; and
    (iii) Information that the receiving party receives without restriction from a third party.
e. The time period that the information must be held in confidence. This can be any reasonable term agreed upon by the parties, and often falls in the range of 2–5 years, depending on the technology in question and the disclosure's purpose. For example, an advertising agency that is working on an advertising campaign that is going to be released within a year would not need an NDA term that extends beyond the advertising campaign release. However, for an outside

consultant that does product testing of beta products to determine a preferred version of a product for commercialization, the NDA could justifiably require that the information be held in secrecy for 5 years or more.

f. A provision defining the remedy available to the non-breaching party in the event of a breach or impending breach. This should recite that the disclosing party is entitled to injunctive relief for breach of contract by the receiving party to prevent the release of the Confidential Information. It is also possible to include a liquidated damages provision as an incentive for the receiving party not to disclose the Confidential Information, although this is less typical given the circumstances surrounding most NDAs where the disclosing party is attempting to obtain information or services from the receiving party.
g. Other miscellaneous provisions can include the following:

   (i) A provision for return or destruction of the Confidential Information when the task or review by the receiving party is completed;
   (ii) A transfer of ownership of any additional intellectual property that results directly from the Confidential Information and/or in connection with the work being done by the receiving party; and
   (iii) A recitation of the courts or jurisdictions where any potential dispute will be resolved.

While NDAs have several advantages, there are a few drawbacks that they cannot address. Many large companies will not sign NDAs for any outside submissions, regardless of purpose. In fact, some large corporations require the opposite: a signed statement saying that no information will be held in confidence and that the party submitting the information will rely exclusively on any intellectual property rights (such as patent or trademark rights) that they applied for, or may obtain, as the sole recourse against the receiving party in the event that their information is used. This typically occurs as a result of a competitor's parallel development efforts. A competitor may accuse a company receiving its confidential information of theft or misappropriation even though the receiving company was already working on a similar development. Rather than facing the potential lawsuits or bad publicity, the policy of such express waivers of confidentiality shields the receiving company.

Even if an NDA is signed, if the Confidential Information is purposefully or even inadvertently disclosed, it may not be possible to "put the genie back in the bottle." Although damages may be available against the discloser, an actual public disclosure cannot be undone. This could result in inadvertent loss of the ability to seek patent protection in many countries that have absolute novelty requirements. While the USA allows a one (1) year grace period from the date of first public use or disclosure of an invention to the public, if the owner of the Confidential Information is unaware of the disclosure, US Patent rights could also be lost. Furthermore, any trade secret information that is publicly disclosed ceases to be a trade secret.

Example A company should require employment agreements with all employees who will have access to a new project, including its senior engineers, designers, and programmers, as well as anyone else that will be working on the new product, its marketing employees, and any others who will have access to the information. If confidentiality terms are not included in the employment agreements, the company can enter separate agreements, preferably at the same time as an annual review and pay raise so that there is no question regarding a potential lack of consideration for the new NDA provisions.

The confidentiality term should extend for a time period beyond the end of employment, especially if a rival competitor is known to poach employees away from the company in order to copy products or product concepts. In the event that an employee with knowledge and/or confidential information related to the project leaves the company, the NDA should provide for injunctive relief to prevent the confidential information from being improperly disclosed.

In addition, any outside vendors used for the new project should sign a project-specific NDA with the company. The vendor agreements should also have specific terms spelling out ownership of any new developments made using the confidential information while carrying out the work for the company.[1]

A distribution of a new product will likely require advance notice of the product. If the company learns that its distributor will not sign an NDA, and to the contrary requires a specific waiver of confidentiality to accompany any offer or disclosure, the company should have any patent applications for its new product filed with the United States Patent and Trademark Office before any disclosure of any information to the distributor. This will protect any potential US or foreign patent rights that the company may choose to pursue.

14.3 Assignment of Rights

An Assignment is a contract between two parties in which rights owned by one party are transferred to the other party. In the USA, all rights to an invention are initially vested in the inventor(s). Accordingly, a formal assignment is important to transfer rights from an inventor, or inventors, to the startup company. For employees, the obligation to assign inventions made in the course of an employee's regular job duties can also be included in the employment contract. If the obligation

[1]A sample NDA is set forth in Appendix D.

to assign inventions is not included in an employee's employment agreement, a separate agreement can be entered including the obligation to assign inventions to the company. This separate agreement should preferably be made and signed with the employee in connection with an annual review and raise so that there is no issue with respect to consideration for the agreement.[2]

Many companies offer employee incentive programs that pay bonuses for creating inventions that help the company. This typically takes the form of a lump sum payment at the time a patent application is filed or a patent is granted. Some countries, such as Germany, have specific statutory requirements that define the amount that an employee must be compensated for any invention that is used by the company.

When working with third parties, it is common to include assignment terms in the vendor contract for inventions related to the specific work. For patentable inventions, this can be critical if a breakthrough is made by the vendor in connection with the development of a company's product. If no agreement is reached before the contract work is undertaken, rights would belong to the vendor or the vendor's employee, creating the potential for being forced into a sole source of supply, or worse, having the product which the company paid the vendor to develop offered to third parties without any ability for the company to control it.

Example Assignments are critical for any intellectual property. For example, assume a startup technology company hires a contractor (writer, drafter, programmer, designer, etc.) whose work product would be eligible for copyright protection. In the absence of a written assignment for works made under contract, the copyrights would be owned by the contractor. It must be clear from the hiring contract that any IP rights created by the contractor are assigned to the technology company and that any work done by the contractor was done as a "work for hire," thereby assigning all copyrights to the startup tech company.

14.4 Employee Education

Employee education is one of the cornerstones of a successful intellectual property program. Inadvertent disclosure of confidential information or new inventions that are being developed can easily result in any potential intellectual property rights being lost, or worse, landing directly in a competitor's hands. The only way to effectively address this is to train employees such that they understand the

[2]A sample Assignment contract from an individual inventor to a startup company is set forth in Appendix C.

ramifications of their actions and the potential cost to the company in terms of lost intellectual property rights and lost profits on new products or developments that cannot be protected.

Many companies hold periodic intellectual property seminars that are presented by the in-house or outside intellectual property counsel. These programs educate employees on the basic tenants of Intellectual Property Law in a practical setting, and how they can handle particular situations. A typical program would include a review of what may constitute patentable subject matter given the company's technology field, the potential bars to patentability that an employee should be aware of, and a review of the startup company's system for documenting inventions and subsequently handling those documents. Employees that regularly deal with third-party vendors should also receive special training related to risks associated with dealing with vendors.

14.5 Accurate Record Keeping

14.5.1 Patents

In the USA, patent applications filed on or after March 16, 2013, are subject to the America Invents Act "first to file" rule, meaning that the right to the grant of a patent lies with the first person to file a patent application, regardless of the date of actual invention. There is a public disclosure grace period, however, which allows the inventor to disclose the invention up to one year prior to filing. In the event that an inventor publicly discloses the invention before another inventor independently develops the same invention and files for a patent on the invention, the first inventor may be entitled to the patent protection due to the one year disclosure grace period. It is important to keep detailed records as to when a disclosure of an invention is made.

Another document that the company should have is an employee invention submission form. This should include sections for a complete description of the invention, as well as any potentially critical events that occur, such as a disclosure to others. This form serves two purposes:

(1) It can serve as the vehicle for the in-house review and a determination of whether patent protection is going to be pursued; and
(2) If the company proceeds with a patent application, it can act as the vehicle for transmitting information on the invention to patent counsel for searching and/or the preparation of a patent application.[3]

For each invention disclosure that is ultimately pursued as a patent application, a company should open a separate file as a place to store all information related to the

[3]A sample invention disclosure form is set forth Appendix A.

invention, including copies of the relevant completed pages of the inventor's notebook, the invention disclosure form, and any known prior art that might relate to the invention, as well as all correspondence and documents related to the preparation, filing, and prosecution of a patent application before the USPTO.

Example There are plenty of horror stories about small time inventors being duped by a large corporation into disclosing the inventor's idea and then the company steals it. A few famous examples come to mind, including the 2007 allegations that Facebook's founder Mark Zuckerberg built the Facebook social media platform from stolen code, or the patent infringement allegations against Heinz's Dip and Squeeze condiment container asserted by a Chicago man who pitched his patent-pending idea for a similar condiment container to Heinz in 2005.

14.5.2 Trade Secrets

Trade secret protection depends on defining and following a strict set of policies for handling the information that is being protected as a trade secret. Trade secret policies should be documented in a policy manual, and all employees that have access to the trade secret information should receive training on handling trade secret information and should be required to periodically review the company's policy regarding treatment of such information. Policies should include how to identify and mark trade secret information, including information or technology under development. Identification may be as broad as "all information related to project X" or down to a specific formula for a product and can be set by management or counsel. Marking should be on both physical and electronic documents, using labels such as "Confidential," "Secret", "Trade Secret," or "Proprietary Information" of the company.

Access to the trade secret information should be on a need-to-know basis inside the company. Access to the information should be on a "log in–log out" basis, whether on paper or electronically. Any electronically stored or transmitted information should be encrypted based on a defined procedure. A policy should also define storage of the information when an employee is away from his work area and may include a locked central or private storage area. The reason for this high level of security is that in a misappropriation lawsuit, a court's inquiry will not only focus on the bad acts of the accused party, but also it will examine and consider whether the company asserting its trade secret rights adequately maintained and safeguarded its trade secrets.

Example In terms of the number of patents issued each year in the USA, Sony has ranked as one of the top ten recipients for nearly a decade. Sony values intellectual property and has company policies regarding procedures that employees must follow when dealing with the company IP and know-how. Not only does Sony require that its employees respect the IP developed internally, but Sony also requires employees to respect the IP of others. All IP generated by Sony employees are assigned to the company. No employee may disclose any proprietary information unless authorized to do so by the company. Use of an IP and trade secret information is limited to only those employees who have a need to know and use the protected information.

14.6 Patent and Trademark Searches

14.6.1 Patent Searches

There are a number of different patent searches that can be useful for a number of different purposes, including patentability, infringement clearance, validity, and state-of-the-art searches.

A patentability search is the most basic search and involves searching US patents and patent publications, as well as potentially other patent and non-patent literature to determine whether an "invention" meets the USPTO requirements for patentability, based on the documents identified by the search. This is a useful tool to gauge the potential for patentability; however, it is not a guarantee that a patent would ultimately be granted. The limitations on patentability searches are that they are generally not exhaustive, and other more pertinent references may ultimately be identified from areas not searched. Accordingly, while negative results can be relied upon, a positive search report merely leaves the possibility of patent protection open.

An infringement clearance search is a search of US patents that remain in force for potential infringement by a new product that is being developed. Infringement clearance searches should be performed prior to the product's launch. This type of search involves a review of the patent claims that remain in force in the relevant classifications for the product being developed. As the search requires a specific review of each independent claim of the relevant patents, it is more complete. If done early enough in the design or development process, a clearance search allows the new product to be modified to avoid potential infringement.

A validity search is a prior art search of US and foreign patent and non-patent documents that is directed against the claims of a specific patent. This can be used to determine whether the claims of a known or asserted competitor patent are valid.

The results of the search can be used for negotiations or can be used to invalidate the patent in a court or USPTO proceeding.

A state-of-the-art search looks at the US and possible foreign patent document collections for representative technology and developments in a particular field. This is used as a research tool for resolving a particular problem or for examining the type of work competitors have done in a given field.

14.6.2 Trademark Searches

Trademark searches determine whether a company can adopt a trademark for its product or service. A trademark search can be done in the federal trademark database or can be done in one or more comprehensive databases. Trademark searches should be carried out before adopting a trademark to determine whether any third party has used the trademark for the same or similar types of goods and may therefore have superior rights in the trademark. Adopting a third party's mark, whether knowingly or unknowingly, may result in a lawsuit for trademark infringement. A trademark search can help avoid this costly litigation.

14.7 Choosing the Best IP Protection for Your Startup

The earlier a company decides what type of intellectual property to pursue, the lower the likelihood that rights will be inadvertently lost. For patents, it is important to observe specific timelines before the invention's first public disclosure, use, or offer for sale. These dates will also determine certain statutory bars to patentability in the USA. For trade secrets, the earlier that a decision is made to protect a new product, or even its method of manufacture as a trade secret, the easier it will be to ensure that some information is not inadvertently released.

14.7.1 Deciding Between Patent or Trade Secret Protection

Many companies use a combination of both patents and trade secrets to protect inventions. However, since these two forms of protection are mutually exclusive in a fundamental regard (i.e., whether or not to disclose an invention), companies must often choose between the two forms of protection. Each has advantages over the other that should be carefully considered when forming the appropriate intellectual property strategy.

14.7.1.1 Differences in Scope of Protection

A first consideration is the difference in subject matter between trade secrets and patents. Trade secret protection covers a wider range of possible innovations, and it has a potentially unlimited duration. The Uniform Trade Secret Act ("UTSA") defines trade secrets as any information, including a formula, pattern, compilation, program, device, method, technique, or process that derives independent economic value from being "secret."[4] While concepts, databases, and compilations are generally not patentable, the UTSA expressly protects them if they are valuable to the business, and the business takes specific steps to keep them secret. Further, other categories of information that may be subject to trade secret protection, where patent protection would not be allowable include customer lists, product pricing, strategic planning, company policies, and market analyses.

14.7.1.2 Differences in Litigation Remedies

A second consideration is the different types of litigation remedies. A US patent grants the owner the right to exclude others from making, using, or selling the invention throughout the USA. In return for this right, the patentee must disclose to the public how to make and use the invention. Thus, even a competitor who independently, and without any knowledge, develops or reverse engineers an invention that is covered by a patent cannot practice the invention without infringing the patent. In contrast, with a trade secret, if a person who is privy to the trade secret unlawfully uses or discloses the trade secret, its owner can enforce the trade secret by filing a suit for misappropriation. On the other hand, if a person independently discovers or develops that particular trade secret, independently of the "first" trade secret owner, the "first" trade secret owner has no recourse. Once that trade secret is disclosed to the public, it is inevitably lost. Trade secrets are litigated less frequently than patents because the owner may not want to disclose the trade secret as part of the litigation discovery process or in court proceedings.

14.7.1.3 Right Creation and Term of Protection

A third consideration concerns the process for creating rights and the term of those rights. Unlike patents, there are no formal application or registration requirements for trade secrets. Any valuable and secret information used by a business is protected, as long as the business takes reasonable steps to keep it secret. This generally means the initial cost of trade secrets is lower. However, sometimes the long-term costs of enforcing and updating internal procedures to keep information secret are more than the cost to secure a patent.

[4]The UTSA is discussed above in the chapter on trade secrets.

The following table summarizes these and other differences between patents and trade secrets.

	Patent	Trade secret
What is the protected subject matter?	Inventions (e.g., processes, machines, manufactures, compositions of matter, and improvements of the foregoing.)	Business information that gives the owner a competitive advantage over competitors and is maintained in secret (e.g., formulas, patterns, compilations, mailing lists, programs, devices, methods, techniques, and processes.)
What is the term?	20 years from patent application filing date	Indefinite, as long as information is kept secret and used in the business
How is it acquired?	Filing a patent application with the USPTO	Acquired upon creation. No formal application process
What are the requirements?	The invention must be patentable subject matter, useful, novel, and non-obvious	The information must give the owner a competitive advantage and must be maintained as a secret
Anticipated costs?	Patent application filing fee, patent issue fee, post-allowance maintenance fees, and attorney time required to prepare and prosecute a patent application	No specific costs. However, costs are typically incurred in trying to maintain the subject matter as a secret (i.e., confidentiality and non-disclosure agreements, implementing internal policies for treatment of confidential information, etc.)
Can others use the invention/information?	Others cannot practice the claimed invention without permission (i.e., license). However, others may design around the invention	Trade secrets can lawfully be reverse engineered by others. In addition, others may use the information pursuant to a non-disclosure or confidential agreement
Can the rights be lost?	Patent rights can be terminated if the validity of the patent is challenged. In addition, rights to a patent can expire if the invention was in public use or sold or offered for sale more than one year prior to filing a patent application (typically through the inventors own actions)	A trade secret is extinguished if it is disclosed to the public. For example, if an owner of a trade secret files a patent application for the invention, the trade secret is lost upon publication of the patent application or issuance of the patent
How is it enforced?	Assert rights against others for patent infringement	Assert rights against others for misappropriation of trade secret

Patent protection is typically favored when:

- It is likely that a product can be reverse engineered;
- The innovation might be discovered by others simultaneously;
- The technology is difficult or costly to keep secret;
- The technology must be disclosed to be of use;
- The subject matter is patentable; and
- The commercial value of the innovation exceeds the registration and maintenance costs.

Trade secret protection is typically favored when:

- The subject matter may not be patentable;
- The subject matter is part of a relatively "crowded" art;
- Keeping the innovation a secret is realistic and would not place an undue burden on the corporation;
- The potential market is likely to last longer than 20 years; and
- The technology is developing rapidly and the innovation is likely to be obsolete in a few years.

Chapter 15
Developing and Managing an Intellectual Property Portfolio

Abstract It is important to have a well-organized and focused intellectual property management program in place, in order to properly develop and enforce a company's intellectual property rights. If the startup is technology-oriented, it is never too early to develop such a plan. This plan should be an integral part of the business plan and should be reviewed and updated as often as the business plan. Factors that should be considered when developing an intellectual property portfolio management program include the following: (1) strategic considerations in developing an IP portfolio; (2) administrative issues associated with managing the IP portfolio; and (3) ongoing IP diligence protecting rights and pursuing others. This chapter will describe a systematic approach how to develop and actively manage an IP portfolio.

15.1 Developing an Intellectual Property Portfolio Strategy that Fits the Startup's Business Goals

Developing a company's IP portfolio strategy requires five (5) steps:

(1) Identifying the corporate strategy and determining how best to align the corporate strategy with the IP strategy,
(2) Identification of existing IP assets (an IP audit);
(3) Determining which of those assets are "core" assets (i.e, those assets that have a strategic importance to the company);
(4) Allocating resources to core and non-core assets as appropriate; and
(5) Setting up a program to ensure that those assets are periodically reviewed and maintained to ensure that the IP portfolio is developed consistently with the corporate business plan.

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15.1.1 Identifying Startup Business Objectives and Goals and aligning these with the Startup's IP Strategy

The first step to developing a startup company's IP strategy is to start with identifying the corporate business strategy. Once there is an in-depth understanding of what drives the company, it is easier to proceed through the next four steps for developing a company's IP portfolio strategy in a way that is highly coupled to the overall business strategy and objectives of the company.

15.1.2 Identification of IP Assets

In order to properly identify IP assets, it is critical that personnel within the corporation who are knowledgeable or familiar with the company's IP or the company's technology plan perform a thorough IP audit. This should also be performed in coordination with an experienced IP attorney. The IP audit should identify copyrights, trademarks, trade dress, trade secrets, confidential information, mask works, domain names, industrial designs, patents, patentable inventions, and other IP assets owned by the company. Some registered assets (for example, patents, trademarks, and copyrights) require periodic maintenance in the form of payment of official fees and filing of official documents. If these fees are not paid or the official documents are not timely filed, these rights can expire. Consolidating all of this information in a single location can help ensure that all of a company's intellectual property can be easily identified, tracked, and maintained.

Along with intangible assets, an intellectual property audit should identify any encumbrances on the company's IP assets. These encumbrances may include agreements (such as distribution agreements, licenses, software licenses, franchise agreements, assignments, covenants not to compete, employment agreements, third-party development agreements, and liens against the intangible assets) and any other liabilities that a company may have with the third parties. The audit should identify whether or not these agreements affect the company's IP or other intangible assets.

Example Fujitsu's patent portfolio contains over 100,000 issued patents and patent applications from around the world. The patent portfolio is broken down into four board technology segments, which represent the specific core areas of industry in which Fujitsu competes. The breakdown is as follows:

(1) Common technologies and future business-related IP—this segment includes technology related to laboratory equipment and corporate center technology;
(2) Electronic devices, including electronic circuit technology;

(3) Ubiquitous product solutions; and
(4) Technology solutions, including communications-related technology and information processing technology.

15.1.3 Periodic Review of IP Assets

Following the initial IP asset review, it is important to ensure that those assets are periodically reviewed. These successive reviews ensure that existing IP assets are properly maintained, and an informed decision is made to retain, sell, or dispose of non-used assets.

The frequency at which such reviews are conducted will vary greatly, depending on whether the company is a startup, an emerging entity, or a long established corporation. At the very least, a yearly audit should be conducted. Preferably, quarterly reviews of a current portfolio should be undertaken. The amount of resources to devote to the review will also depend upon the importance of the IP assets to the company. If the only core asset that has been identified is the corporate name and that has been protected with a trademark registration, in-depth IP audits on a yearly basis may not be necessary.

Example Fujitsu routinely reviews its IP for opportunities to enhance its portfolio. For instance, pending patent applications are periodically reviewed to determine if there is any content that can be protected via supplemental or divisional patent application procedures, or whether protection should be sought in additional countries. Non-core assets may also be dropped.

15.2 Administrative Issues for Long-Term IP Portfolio Management

After building an IP portfolio, administering the IP portfolio is a responsibility that requires integration of knowledge from many different parts of an organization. A well-executed IP portfolio management program must be closely tied to a company's strategic plan, marketing initiative, legal department, and corporate research and development initiatives. Although tying all these aspects together in a comprehensive IP portfolio management program may appear to be daunting, there are a number of steps that make the management of an IP portfolio a much easier endeavor, regardless of the size of the IP portfolio.

15.3 Ongoing IP Diligence: Protecting Rights and Pursuing Others

15.3.1 Defending Your IP

Aggressively pursuing competitors with litigation can be reckless if the company is vulnerable to an easy counterattack. Pursuing a solid defensive strategy means putting into place the minimum measures necessary in order to protect core IP assets.

IP protection is, by its very nature, defensive. Patents prohibit others from using the products or processes generated from research and development programs. For a technology-centric company, this can represent the core of the business. Trademarks and service marks protect one of the most important aspects of a corporation's image; its name, logos, etc. Significant amounts of marketing and advertising budgets are typically allocated to using trademarks and service marks. Therefore, it is extremely important to protect these valuable assets. Copyrights protect a corporation's expression of ideas such as drawings, Web sites, marketing materials, documents, Web site designs, and software. Trade secrets, if handled properly, help protect customer lists, business plans, and strategic plans. Since large amounts of a company's resources are typically allocated to all of these endeavors, it is important to consider protection for all aspects of a company's IP portfolio.

Pursuing a vigorous defensive strategy has additional benefits. Such a strategy not only insures that the IP rights are protected, but also can strengthen those IP rights. For example, with effective trademark protection, if a trademark holder does not provide notice to competitors or the public at large from using a trademark to refer to a particular product (for example, using the term "Kleenex" as opposed to "facial tissue"), the trademark may ultimately become "genericized," whereby anyone can use the mark. Thus, rights to the mark will be lost, and it will cease to become an asset for the company. This happened with respect to the term "aspirin" for the Bayer Corporation and the term "escalator" for the Otis Elevator Company.

A similar defensive strategy may be pursued using patent protection. If a corporation has a product that is protected by a patent, it can defend against another company trying to copy that product by asserting the patent against the infringer. If successfully implemented, such a strategy will protect the product and, as a result, the company's market share.

There are many different reasons why companies initiate intellectual property litigation. One of the primary defensive weapons that a company may have is to counter a claim of infringement with a counterattack using its own IP portfolio. When a company that is aggressively pursuing patent infringement litigation realizes that the alleged infringer is not going to "cave in," the company may become more reasonable regarding its demands or may back off from a litigation altogether. Without a defensive patent portfolio as a counterthreat, a company may become vulnerable to repeat attacks from different competitors. Often, entire industries will

be cross-licensed in such a fashion. However, such cross-licenses are only granted to those companies that have an IP portfolio to bring to the table.

Several measures that should be considered when putting together a strong defense include the following:

Are all core assets protected?
It is critically important to ensure that all IP assets that have been identified as core assets are properly protected. If they are not protected, a company may be vulnerable to a competitor entering the market with a similar competing product, thereby quickly eroding the company's market share or operating margins. Core IP assets being robustly protected is also attractive to potential investors.

Having IP assets on fundamental technology will help insulate a company from attacks by competitors having IP assets on related technology. Although such claims may be frivolous, defending against these attacks can drain smaller companies of desperately needed capital and distract management from its primary focus.

Have clearance opinions been sought on all products to ensure that a company is not charged with infringement of competitors' IP portfolios—particularly patents or trademarks?
Just as critical as protecting a company's core assets, is the necessity of ensuring that its products do not infringe competitor's IP rights. One way to determine this is to periodically review the industry for competitors' IP assets. If relevant IP assets are identified, it is recommended that a company seeks a clearance opinion or a freedom to operate opinion from an experienced IP attorney. This can help ensure that the company's invention is free to be used or sold without charges of infringement by competitors.

Have vulnerabilities or gaps in competitor's product lines or IP assets been identified?
Once a company assesses its own vulnerabilities, it is critical to identify the vulnerabilities of its competitors. Although this does not require immediate or offensive action, such information will become invaluable should a competitor begin to make demands of the company.

If you have determined not to pursue patent protection for an invention, have you considered a defensive publication in order to keep a competitor from gaining rights to the idea?
As discussed above, a company will need to make strategic decisions about which IP rights to expend resources for protection. If a decision is made to forego protection for a particular asset, a company should consider whether the asset could provide competitors with an advantage if independently developed. In order to keep competitors from gaining such a strategic advantage, publication of an article can dedicate information about the invention to the public in general and mitigate the harm resulting from a competitor's use of the invention.

15.3.2 Leveraging Your IP Rights

An IP portfolio is a significant strategic asset and can be used to leverage favorable outcomes against competitors. A primary offensive weapon is the threat of an infringement suit. A company can also use licensing and the threat of (or actual) litigation in order to generate revenue from its IP assets.

Example Fujitsu understands the value of leveraging IP assets. In the early 2000s, Fujitsu become involved in an infringement suit with Samsung over Fujitsu patents pertaining to basic technology for plasma display panels. The litigation came after Fujitsu had tried for years to negotiate compensation from Samsung.

When negotiations did not produce the desired outcome, Fujitsu pursued remedies through the court system on two fronts. First, Fujitsu filed suit in Tokyo, Japan, asserting Japanese Patent No. 2,845,18 and seeking injunctive relief. Next, Fujitsu filed suit in US Federal District Court in Los Angeles, California asserting 10 US Patents. Samsung countersued, challenging the validity of Fujitsu's US patents. The Japanese court granted Fujitsu's injunction, and within two months, the parties reached a settlement agreement. The resolution involved the execution of a cross-licensing agreement between the parties.

Licensing and cross-licensing are other techniques used by Fujitsu to leverage its IP. Fujitsu considers cross-licensing as a way to ensure business flexibility. Several large corporations have entered into cross-licensing agreements with Fujitsu, including Samsung Electronics, International Business Machines, Motorola, Texas Instruments, Hynix, ARM, and Intel Corporation.

When deciding to aggressively pursue an offensive IP strategy, corporate management must be willing to back up any infringement allegations. There are several measures that should be considered when putting together a strong offense:

(1) Are competitors litigation averse (i.e., do they have a history of settling litigations quickly)?
(2) Is your corporate management and Board of Directors willing to use the threat of litigation (or actual litigation) in order to enforce the IP rights or gain a strategic advantage over your competitors?
(3) Is the company willing to monetize its unused IP assets through franchising, licensing, or sale?
(4) Is the company willing to develop IP assets solely for the purpose of monetizing them?
(5) Is the company willing to search for and purchase IP assets and other corporate assets from those that are available in the marketplace?

All of these measures should be considered carefully when crafting a winning offensive strategy. A company should carefully weigh the risks and benefits prior to embarking upon an IP strategy that incorporates an aggressive offense as a central part of its strategy. Such a strategy will only be successful if it has the full support of management and directors, as it will take up the large portions of corporate resources.

Chapter 16
Valuing Startup Companies

Abstract Although traditional valuation approaches are sometimes used to value technology companies, special techniques are required to compensate for the unique characteristics of these organizations. Due to the nature of the product development and commercialization cycles, and the lack of revenue and earnings metrics for guideline market comparisons, alternative approaches are sometimes necessary. Financial forecasting is difficult and risk rates are high for the application of discounted cash flow models. Probability-adjusted or risk-adjusted forecasts present a more refined analysis of expected future events and thus a more refined estimate of enterprise value. In addition, capital structures are complex and consideration must be given to the preferences of senior securities and dilutive effects of options and warrants when determining the value of common stock. In addition, there appears to be a growing interest in finding ways to better monetize a company's intellectual property.

Simply stated, the value of a business or asset is represented by the future economic benefits that will inure to a buyer. The value of a business depends on an estimate of the future economic benefits, the period of time for these benefits, and the rate of return required by the buyer based on the industry- and company-specific risks.

Business valuation is a process used to estimate the economic value of an equity interest in a business. There are various elements of a business valuation, which include the definition of value to be used, economic conditions, financial analysis, normalization of earnings, valuation methods and approaches, industry and company risk factors, and type of interest owned.

Valuations of traditional, mature companies can be challenging in spite of using industry-accepted valuation methodologies; however, technology company valuations take this challenge to a new level. Traditional companies tend to have different characteristics than startup and small technology companies. Traditional companies typically have the following:

(i) More hard assets, such as real property, plants, and equipment.
(ii) More historical financial data.
(iii) Less uncertainty in their projections and forecasts.
(iv) Less volatility in their cash flows.

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These characteristics can have a significant impact on the way companies are valued. Technology companies can range from early stage to commercialization to growth or expansion stage to mature, depending on their stage in the life cycle. The information available is often rather limited and there tends to be significant uncertainty with regard to both the product and any financial data.

16.1 Purpose of a Valuation

A business valuation may be needed for several reasons. The most common purposes are the following:

- Gift or estate tax purposes.
- Determining the sale or purchase price of a business.
- Allocate purchase price among acquired assets.
- Buy–sell agreement purposes.
- Stock option and other share-based compensation plans.
- Obtaining capital.
- Damage calculations in a litigation.

Technology company valuations are required for the following situations:

- Equity ownership must be fairly allocated at each equity round. This requires an overall enterprise valuation as well as a valuation of the specific classes of equity such as preferred and common interests.
- Technology companies usually grant stock options, restricted stock, or similar securities in order to attract and retain the best talent. The underlying enterprise value and the value of the class of security to which the incentive relates must be determined in order to value these incentives. There are both financial and tax implications of such incentives.
- In order to obtain subordinated or mezzanine debt financing for a technology company, debt holders generally require warrants as an additional incentive to offset some of the risk they are taking. The value of such warrants must be valued for financial reporting.
- The Financial Accounting Standards Board has issued accounting pronouncements that require the fair value of stock options, warrants, restricted stock, or similar securities to be recorded in the company's financial statements.
- The Internal Revenue Service has issued regulations (IRC 409A) that require companies to grant options at an exercise price equal to or greater than the underlying security value on the date of the grant or suffer adverse tax consequences. In order to determine whether granted options meet this requirement, the fair market value of the security subject to the option must be valued.

Different definitions of value can be used. The valuation results can lead to different values based on the definition. The definitions include fair market value, fair value, investment value, strategic value, and liquidation value. Our discussion in this section will focus primarily on fair market value.

16.2 Methodologies

The valuation of businesses utilizes several methodologies that include cost, income, and market approaches.

- The cost or asset-based approach values a business based on the difference between the fair market value of the business assets and the fair market value of its liabilities, which represents the fair market value of the company's equity—in essence, the cost to replicate or reproduce it. The theory being that a buyer would only pay an amount not to exceed the cost to replicate the business (i.e., functionality of technology, management, market share, and reputation).
- The income approach values a business based on its expected earnings or cash flows.
- The market approach determines value based on an analysis of sales and investments in comparable businesses. Comparable businesses must be similar with regard to industry, size, capital structure, management, and position in the market.

Factors used to determine the value of technology companies have changed over the years. Valuations of technology companies continue to utilize the income and market approaches rather than an asset-based approach; however, their valuations are focused on near-term breakeven or profitability, strong management, experienced board of directors, size of market, strategic "partnerships," and a technology or service with a sustainable competitive advantage. Strategic partnerships and a technology with a sustainable competitive advantage will have a significant impact on the value of a business. Management and advisors must develop strategies to generate these sustainable competitive advantages that will allow the company to dominate markets. This is generally done by analyzing competition, positioning the company in a unique market space, performing market research, and implementing appropriate strategies. The proper execution of these strategies is the critical component.

16.2.1 Cost or Asset-Based Approach

The cost approach is also known as the asset-based approach. This approach is not a reliable indicator of value for technology-type companies. Historical costs do not

necessarily represent the value of the company or even the value of the asset for which the costs were incurred.

In the asset-based approach, all of the subject company's assets and liabilities are analyzed and valued separately. The company's assets include tangible and identifiable intangible assets. However, it does not include a value for goodwill unless it was acquired via a transaction. Goodwill (GW) is the residual value of the enterprise value less tangible and identifiable intangible assets.

Most companies can maximize their value based on their earnings level and not just their net asset value. A technology company's value will consist primarily of its patents, in-process research and development, customer list, database, trade secrets, other intellectual property value, and goodwill. A market or risk-adjusted income approach is usually more appropriate for technology companies.

16.2.2 Income Approach

The income approach can be utilized by (i) capitalizing the historical earnings of a company or (ii) discounting future earnings or cash flows (DCF) of a company. The DCF approach is based on the premise that the total enterprise value of an entity is the present value of its forecasted future net cash flows, plus the present value of a terminal or residual value. The terminal value is the value of the future cash flows at the end of the discrete forecasted period. Business enterprise value is also referred to as the market value of invested capital (MVIC). MVIC includes the value of both interest-bearing debt and equity or total invested capital. Equity value is the MVIC, less the value of interest-bearing debt. This method requires that a stream of earnings or cash flows be reliably forecasted into the future and that a terminal value assumption be made. The amounts of forecasted cash flows and the terminal value are then discounted to the valuation date using an appropriate discount rate.

The historical earnings for technology companies are usually not representative of future earnings. Technology companies tend to incur significant costs early on and then, after product commercialization, grow rapidly. This would mean that the DCF is more appropriate to value the company versus the capitalization of the historical earnings method.

The discount rate used to determine an entity's MVIC is based on the weighted average cost of capital (WACC). The discount rate reflects percentages of total debt and equity to capital and the rate of return that an investor would require based on the risk associated with the investment. The WACC includes the cost of debt, after tax, and the cost of equity.

16.2.3 Market Approach

Two primary market methods generally exist: the guideline public company method and the guideline company transaction method (also known as guideline merged and acquired company method).

A guideline public company method analysis is intended to derive valuation multiples from traded prices of public companies that are relatively comparable to the subject company. The value of the subject company is then estimated by applying an appropriate valuation multiple derived from the public companies to the corresponding metric of the subject company. These metrics include revenues, pretax income, operating income and earnings before interest, taxes, depreciation, and amortization (EBITDA). A valuation multiple is usually a multiple computed by dividing the MVIC and/or the equity value by the relevant metric.

The level of value derived by the guideline public company method is on a marketable, minority interest basis. This means that the value needs to be adjusted to reflect the fact that a privately held company is typically a non-marketable, controlling interest. An example of this is as follows:

Marketable, minority interest basis	$100
Control premium of 20%	20
Marketable, controlling interest basis	120
Discount for lack of marketability of 15%	(18)
Non-marketable, controlling interest basis	$102

The guideline company transaction method is another market approach. This method is intended to derive valuation multiples from the acquisition prices of public or private companies that are relatively comparable to the subject company. The value of the subject company is then estimated by applying an appropriate valuation multiple derived from the transactions to the appropriate metrics of the subject company. Factors to consider with regard to the comparability of market transactions to the subject company are as follows:

- Terms of the selected transactions.
- Consulting agreements versus purchase price.
- Number of companies in the population.
- Comparability of data—for example, similar growth trends and profitability.
- Stock versus asset transactions.
- Dates of the transactions in the population.

The transaction prices may represent fair market value, investment value, strategic value, or a mix of these. Understanding these guideline transactions will allow you to better determine which definition of value they represent and thus you can apply the data appropriately to the subject company.

16.3 Normalization of Earnings and Cash Flows

The concept of normalization adjustments is to present the financial data such that it reflects the expected future economic benefits to an investor or a buyer. This means the elimination of non-recurring revenues and expenses from the subject company's financial statements. Normalization includes adjustments for such items as excess officer compensation (compensation that exceeds industry norm), loss of a major customer or sales contract, one-time expenses, unusual research and development costs. It is critical to use the "true" expected cash flows of the subject company for valuation purposes. No buyer ever bought a company for its past cash flows. They are buying the future cash flows. Historical cash flows may be used as a proxy for future cash flows; however, the cash flows need to be normalized. If historical cash flows are not representative of the future, then forecasted results will be used to value the company.

16.4 Impact of Risk on Value and Cost of Capital

Risk has a major impact on value. Risks that need to be considered include external risks such as the economy and the industry of the subject company and internal risks that are specific to the subject company.

Risk is generally defined as the degree of uncertainty as to the realization of expected future benefit streams such as earnings or cash flows. Risk is directly correlated with the amount of uncertainty and volatility of the expected economic benefits. The higher the uncertainty, the higher the risk. The higher the risk, the higher the required rate of return an investor will require and thus, the lower the multiple of earnings he or she will pay. The present value of the cash flows and thus the company's value decrease as risk increases. This creates an opportunity for the subject company to enhance its value over time even if its revenues and earnings are flat by reducing its risk profile. This can be done by focusing on such items as:

- Stability of earnings
- Size of company
- Protection and leverage of intellectual property
- Depth of management and dependency on key people
- Stability and skills of workforce
- Level of differentiation
- Competition (barriers to entry, switching costs, etc.)
- Diversification of products, services, and geography
- Dependency on key customers and vendors
- Litigation.

Cost of capital is composed of the cost of equity plus the after-tax cost of debt. The discount rate is derived from the WACC discussed earlier in the income approach section.

Risk is addressed in the valuation process through the discount or capitalization rates that are applied to the earnings or cash flows. The cost of equity consists of the risk-free rate, an equity risk premium, an industry risk premium, a size premium, and a company-specific risk. The company-specific risk allows the valuator to customize the cost of equity for risks specific to the subject company where these risks are not already included in the industry risk premium.

16.5 The Uniqueness of Early-Stage Technology Company Valuations

To fully understand valuations of early-stage technology companies, knowledge of the different economic and even social environments in which these companies operate is useful. In addition, since most technology companies are funded by venture capital firms, knowledge of the venture capital industry can be beneficial.

Due to the lack of historical financial data and the high level of uncertainty, the reliance on traditional methods for valuing early-stage companies is not useful.

Determining the value of an early-stage technology company requires the use of alternative approaches versus a company that has revenues and is profitable. The approaches require a greater understanding of the qualitative aspects of the company such as the management team, business model, and size of the specific market. Early-stage technology companies (i) tend to lack an operating and financial history, (ii) have products or markets not yet validated, and (iii) typically have value concentrated primarily on technology, patents and intellectual property (IP), market size, and ease of access to capital markets. Technology companies tend to require rapid growth or risk possible loss of an opportunity. The primary risks associated with technology companies are addressed in the following questions:

- Will the technology work as expected?
- Is there a demand in the marketplace for the technology?
- Will the marketplace accept the pricing strategy?
- Is management capable of executing the business plan and achieving corporate goals?

The more information on these factors the less uncertainty. Less uncertainty, like any other investment, means less volatility and better ability to substantiate value. Obviously, having trailing revenue answers the first three of these questions and provides financial data to form more reasonable and reliable forecasts. However, early-stage companies generally only have a beta version of their product. This is why other types of metrics and qualitative data must be utilized to determine a company's value.

Since the cost, income, or market valuation approaches can be inappropriate for early-stage technology companies where the business is in a prerevenue and thus pre-earnings stage, more non-traditional methods need to be used to determine value. These include the following:

- Stage of company—A range of value is often based on the stage of the company as to its product development and time to revenues. Marketplace data are generally available as to the valuations of other early-stage companies at a similar stage.
- Average dilution for early-stage investment round—Early-stage companies typically give up 25–40 percent of the company in a seed stage round of funding. The post-money valuation can be estimated by dividing the amount of funds generated in the round by the dilution percentage. The premoney valuation is then calculated by subtracting the new funding from the post-money valuation. So if a company receives $1 million in new funding and gave up 30 % of the company, then the post-money value would be $3.333 million ($1.0 m/0.3). Its premoney valuation would be $2.333 million ($3.333 m–$1.0 m).
- Prior round financing—A prior round value may be able to be utilized to estimate the value of a technology company if no significant events have occurred since the last funding transaction.
- Venture capital method—This method focuses primarily on value at the date of an expected exit from the investment. It values the company at the future expected exit date based on a multiple of sales or earnings and discounts the value to today using a present value discount rate. The method factors in additional dilution from future investments and uses a high discount rate to take into account the risk that the future earnings and value do not come to fruition.

Many times, early-stage financing will take the form of convertible debt where the debt holders can convert their investment into equity at a discount to the next round of financing's valuation. This defers the valuation question to a later date.

Technology company valuation approaches and methods are summarized in the following chart:

	Stage of development	Typical type of financing	Typical valuation approach	Valuation methods
1	Prerevenue; no product; initial product research and development (more research than development); still building management team	Seed capital (common stock) from friends and family, angel groups, family offices; convertible debt	Market	Option pricing model (OPM); based on stage of company

(continued)

(continued)

	Stage of development	Typical type of financing	Typical valuation approach	Valuation methods
2	Prerevenue; substantive cost data; product development in midstream	Series A round (preferred stock); usually angel groups or early-stage venture capital (VC) funds	Market	OPM; stage of company; prior round
3	Key development milestones are met; beta model is complete; market well understood; still prerevenue but may show customer interest	Series B and/or C rounds (preferred stock)	Market; income	OPM; prior round; discounted cash flow ("DCF")
4	Product revenue; operating at a loss	Series C and/or D rounds (preferred stock or convertible debentures)	Market; income	OPM; prior round; DCF
5	Generating significant revenue; operating at a profit or breakeven	Additional series of preferred stock	Market; income	Guideline public company data; guideline market transactions; DCF
6	Financial history of profits and positive cash flows	Liquidity event or IPO; mezzanine financing	Market; income	Guideline public company data; guideline market transactions; DCF

16.6 Allocation of Enterprise Value to Senior and Junior Equity Interests

To this point, we have referred to the value of the overall enterprise. Technology companies, however, tend to have complex capital structures as the result of their capital-raising activities needed to fund long periods of time until products are developed and introduced into the marketplace.

Capital is often raised by issuing common stock, preferred stock, convertible debt, options, and warrants. In certain cases, the value of one class of securities must be determined. For example, the per-share value of common stock must be determined for the purposes of granting options for common stock. It would be incorrect to divide the overall enterprise value by all shares outstanding to arrive at the per-share value of the common stock due to the preferences of senior securities and the dilutive effect of options and warrants. Preferences of senior securities could include items such as dividend and liquidation preferences, voting rights or other

control features, conversion features, participation features, and redemption rights. The exercise of options and warrants could create additional shares outstanding, thus reducing the per-share value of the common. Three complex, yet commonly accepted, valuation methodologies are used to allocate value among the various classes of capital giving consideration to the preferential rights of senior securities.

16.6.1 The Current Value Method

The current value method assumes senior security holders would monetize their value through their liquidation preferences and participation rights in an assumed imminent liquidity event. The remaining enterprise value would represent the common stock value. This method is only used where there is an imminent liquidity event.

16.6.2 The Option Pricing Method

This method relies on financial option theory to allocate value among different classes of stock based on a future "claim" on value. This method is generally used for early-stage technology companies where future expected earnings forecasts are not reliable.

16.6.3 The Probability-Weighted Expected Return Method

Share value is based on the probability-weighted present value of expected outcomes such as a future liquidation event, IPO, or continued operation as a private enterprise as well as the rights of each class of securities. This method is used for more mature technology companies with reliable future expected earnings.

16.7 Leverage and Monetization of IP

An intangible asset, which includes IP, continues to represent a larger portion of the value of companies in general, let alone technology companies. Intangible assets represent greater than 80 % of the market value of the Fortune 500 companies. IP will have the following attributes:

- It is subject to specific identification.
- It should be subject to legal existence and protection.

- It should be subject to the right of private ownership and be legally transferable.
- There should be tangible evidence (contract, source code, etc.).

As mentioned earlier, intangible asset values generally represent a significant portion of the value of the company. These intangible assets include such items as:

- Marketing-related—Trademarks, trade names, brand names.
- Technology-related—Process patents, product patents, technical documentation, technical know-how.
- Artistic-related—Copyrights, literary works.
- Data processing-related—Proprietary computer software, software copyrights, databases.
- Engineering-related—Product patents, trade secrets, proprietary documentation.
- Customer-related—Customer lists, customer contact information.
- Contract-related—Favorable supplier contracts, license agreements, non-compete agreements.
- Human capital-related—Employment agreements, trained and assembled workforce.
- Location-related—Leasehold interests, easements.
- Goodwill-related—Enterprise GW, personal GW, excess of enterprise value over tangible and identifiable intangible assets.

IP is a specialized type of intangible asset. It is commonly defined as intangible assets that are either creative (e.g., trademarks, copyrights, and computer software) or innovative (e.g., patents and trade secrets).

In today's market, the ability to understand the value drivers of IP is critical. This understanding will impact not only the company's IP strategy but also how best to monetize IP. There is a clear relationship between the quality of a company's IP, how well it is protected, and a company's value. IP rights provide an opportunity and potential to generate revenues and profits, but it does not guarantee revenues or profits. Execution of an IP strategy and taking advantage of these IP rights allow the technology company to create value and monetize such assets.

16.7.1 Value of IP and Impact on Technology Companies

The value of identifiable intangible assets, and thus technology companies, is influenced by such factors as:

(i) Market share,
(ii) Market potential,
(iii) Economic life of the IP,
(iv) Cash flows from the IP,
(v) Life cycle stage,
(vi) Market position, and
(vii) Barriers to entry.

By focusing on these and possibly other factors that influence value, the intangible assets of a technology company can become more valuable. For example, a company can extend the economic life of a patent or trade secret through threatened enforcement actions or significant barriers to entry.

The valuation approaches for intangible assets are similar to that of an enterprise in that they include cost, income, and market. However, the methods within each category can be different.

- Cost approach includes the following:
  - Reproduction method—Estimated cost to reproduce an exact replica of the subject intangible asset using same design, standards, and materials.
  - Replacement method—Estimated cost to replace an asset that has the same functionality as the intangible asset.

  Replacement is most likely more relevant for IP than the reproduction method. A seller's cost of IP is irrelevant to a buyer. The only cost that matters is the buyer's "substitution cost," i.e., the cost to replicate the functionality of the technology or IP. A buyer will not pay more than the cost to develop a substitute IP.

- Market approach includes the following:
  - Sales transaction method—Estimate value based on actual market transactions or sales of comparable or guideline intangible assets in arms-length transactions.
  - Relief from royalty method—Estimate value of the subject intangible asset based on the cost saved by owning the intangible asset versus having to pay a market royalty rate for the use of it. The present value of these savings is then capitalized to determine value. In using this method, arms-length royalty rates are analyzed. The licensing transactions selected to determine the royalty rate should be for assets with similar risk and investment return profiles.

- Income approach includes the following:
  - Discounted cash flow method—Estimate value based on the present value of the expected cash flow associated with the ownership and use of the subject intangible asset. Since the cash flows are derived from the use of not only the subject asset, but also all other assets of the company, an economic charge must be deducted from the future cash flows to account for the utilization of the other company's assets.
  - Comparative income differential method—Estimate value by comparing the income generated in two scenarios; one with and another without the use of the intangible asset being valued. The present value of the differential in income equates to the intangible asset value.

– Monte Carlo and other simulation models—The Monte Carlo method estimates key variables within certain ranges of outcomes and with related probabilities.

16.7.2 IP and the Enforcement of Rights

IP can be protected numerous ways from (i) well-written, defensible patents to (ii) non-disclosure agreements and other protective measures for trade secrets to (iii) non-solicitation agreements for customer lists and on and on.

Historically, only large corporations could afford to wage the frequently long-term, expensive patent litigation wars. Smaller firms often capitulated as high costs to litigate meant they would be forced to rely on scarce cash reserves and available debt.

IP insurance has been around for some time but it has largely been defensive in nature. It covers the cost of legal fees and damages (up to policy limits) associated with responding to allegations of IP infringement from a third party.

But what about the smaller- or medium-sized firm who develops an innovative technology? How can it protect itself from an infringer who is significantly larger than them?

The value of IP is dependent on the owner's ability to enforce the rights imbedded in the IP, whether that is a patent, trademark, confidentiality agreement, or non-compete agreement. Without liquidity and the capital resources to enforce these IP rights, the value of the IP can be diminished. One way to enforce IP rights is through enforcement insurance; it is designed to reimburse the insured for legal expenses incurred (up to a specified amount) to enforce its IP rights. The underwriting process, in theory, provides additional validation of the IP and the insurance proceeds provides the means and liquidity for the company to enforce its rights.

The insurance may actually discourage potential infringement by demonstrating financial wherewithal and could reduce the pressure to settle due to otherwise limited resources. Additional benefits could include the following:

- Reduces risk and uncertainty.
- Enhances the value of IP.
- Prevents unexpected use of cash resources.
- Provides additional protection to the primary assets for investors.
- Accelerates commercial development and licensing opportunities since IP is protected.

As the value of IP increases so too does the associated threat of infringement.

16.7.3 IP Monetization

Monetization is the process of extracting value through a liquidity event. The monetization of IP is the process of extracting value from the business' IP. This usually entails the sale of the IP or the entire business. However, there are other ways to monetize IP.

An interesting new development is the use of the IP as collateral for loans. The author was recently engaged by a financial institution to value brands and trade names being acquired by a company. The primary assets of the new venture were various forms of IP as the company outsourced the manufacturing and other operational aspects of the business. The brands had strong cash flows and the financial institution loaned funds for the acquisition based on these cash flows and the value of the IP.

In addition, there have been various discussions with regard to private investor groups that are designed to provide loan guarantees to growth companies that own significant intangible assets.

Certain insurance and financial companies have provided credit enhancements to banks and other investors for royalty- and non-royalty-generating patents, trademarks, and copyrights, which were then used as collateral in a structured financing. These companies will typically evaluate the strength and breadth of the IP, value the IP, and issue a guarantee to the financial institution or investor group. They will then charge a fee for the guarantee and credit enhancement. It has generally been used for larger, more mature IP, but interest is increasing in utilizing this concept for smaller companies as well.

The utilization of (i) lending on IP, (ii) having investors use intangible assets as collateral for a loan guarantee, or (iii) utilizing a credit enhancement insurance instrument are just some ways to generate capital resources and monetize these assets. It also provides less expensive cost of capital through use of senior or mezzanine debt along with equity capital.

As companies become more virtual (outsourcing more and more functions) and focus mainly on building value in their technology and IP, the use of asset-based IP lending and investor-guaranteed debt should increase. It behooves technology companies to focus on what creates value, and this is usually IP and intangible assets in general, not necessarily hard assets.

The goal of the ideas discussed in this section is to provide insight into ways to protect, optimize, and monetize the real value of a technology company, its intangible assets. However, there is no guarantee that even if these strategies were used, that financing would be available.

Chapter 17
Licensing of Intellectual Property Rights for Startups

Abstract Licensing IP can be a valuable tool for companies of any size and has many advantages. IP-holders may exclude others from using their protected IP. Licensing agreements are effectively grants to others made by the IP-holder for access to the protected technology, while creating a revenue stream for the IP-holder. For example, a high-technology consumer electronics company may need to license proprietary manufacturing equipment from another company. Conversely, a company may consider licensing its product along with a trade name and marketing campaign to a third party to create a larger distribution network and generate revenue from a larger market. Finally, IP rights can be licensed or, in some cases, cross-licensed to resolve litigation.

17.1 What Is an Intellectual Property License?

An IP license is a contract between two parties allowing the licensee to use at least a portion of the licensor's intellectual property in exchange for some consideration. Some examples of what the licensor receives are a lump sum payment, multiple payments, a royalty stream, goods, services, a cross-license to the licensee's IP, or combinations thereof. Where there are multiple payment types due during the term of the license, the payments may be tied to the sale of goods or services provided or sold (e.g., as a percentage of gross or net revenue for a product that the licensee is selling). Technology transfer agreements, which are often used by universities to capitalize on research and development, often involve an up-front minimum payment as well as a stream of royalty payments.

Example In 2005, the Semiconductor Manufacturing International Corporation (SMIC) was looking for a strategy to help it maintain its competitive edge in the nonvolatile memory (NVM) market. Being a world-leading semiconductor foundry, SMIC needed the next step in NVM technology. SMIC found what it was looking for in Saifun Semiconductors'

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NROM® technology. Saifun's NROM® technology is used in the production of flash memory-based products and allows for storage of up to four bit-per-cell (over twice the storage capacity of basic memory cells). SMIC lacked the IP rights to this new technology, and Saifun lacked the manufacturing capabilities to produce its patented technology. Thus, SMIC and Saifun entered into a licensing agreement where SMIC was permitted to manufacture NVM based on Saifun's patented NORM® technology, and both parties benefitted from the arrangement.

17.2 Factors to Consider in an IP License

There are numerous factors that need to be considered in an IP license that are unique depending on the facts and circumstances presented. Rarely, if ever, are two licensing deals the same. Such factors may include what rights to license, term, territory considerations, exclusivity, the amount and structure of the royalty, indemnification from damage caused by the other party, etc. Special consideration is also required if a license relates to the use of a licensor's trademark. These issues are discussed briefly below.

17.2.1 Identification of Rights to Be Licensed

Patent rights include the right to exclude others from making, using, selling, or offering for sale a patented article or process. By licensing a patent, the patent holder is giving permission to the licensee to no longer be excluded from practicing the patented invention. Patent rights are territorial and are limited to the country in which the patent is granted. Trademark rights are the right to use a trademark in connection with goods or services and are also territorial by country. Other rights can provide access to a proprietary or trade secret technology or know-how.

Example Tyco Electronics produces many patented electronic technologies and components, which it has made available for sale either directly from its company Web site or through authorized distributors and resellers. While Tyco holds the IP rights to a particular electronic device that is for sale, it has granted the authorized distributors and resellers the right to sell its products.

When creating a licensing agreement, it is important to identify the rights that are going into the license. This could include the rights of one or more of the patents directed at the particular device or technology, as well as the

know-how related to manufacture of the product, trademarks associated with the product, whether registered or unregistered, and possibly trade secrets, such as the product formula, if there is one.[1] As patent rights are for a limited term (the maximum life of a patent being 20 years from the earliest filing date) and any patent license would automatically terminate once the patent expires, it is beneficial to also license intellectual property rights that do not expire, such as a trademark and/or technology and know-how for manufacturing the product so that the license does not have a fixed term.

17.2.2 Restrictions

A license allows the licensor to restrict a licensee's activities to something less than an unlimited right to use the licensed intellectual property. For example, a patent licensor may choose to grant a licensee one or more of its rights to make, use, sell, or offer for sale a patented product.

Another restriction is whether the licensor grants an exclusive, sole, or non-exclusive license. An exclusive license is similar to an assignment of the IP rights to the licensee, and the licensor foregoes the ability to use its own IP rights in favor of the licensee.

- An exclusive license presents the most value to the licensee because it prevents all competition from using the licensed IP rights and is often granted by research institutions that have no intention of commercially exploiting an invention.
- A sole license, in contrast to an exclusive license, allows the licensor to continue to use the IP rights, but limits the licensor from granting any further licenses to third parties. Thus, in a sole license agreement, both the licensor and the licensee may use the technology under license.
- A non-exclusive license allows the licensor to grant multiple licenses to third parties, which allows for multiple companies to use the licensed technology, which increases competition.

Various types of restrictions may also be included in a licensing agreement. For example, territorial restrictions are a common restriction in license agreements. A license should explicitly define the licensed territory or geographic area where the licensee may use the licensed technology. It is very common in licensing agreements for a company to only be permitted to service a limited geographic territory. In exchange for the territorial limitation, the licensor will not make a similar grant to

[1]Divulging trade secret information, even under the terms and safeguards noted in a license, can involve the risk of loss of the trade secret, and often, it is beneficial to structure the license so that a trade secret is not divulged.

any third party allowing the third party to compete in this same restricted area. This is a very common practice in the operation of franchises.

Field of use restrictions are also frequently included in licenses and may limit the use of the equipment or components contained within the product to a specific type. Field of use restrictions could limit the use of the licensed technology to certain applications such as therapeutic applications, veterinary applications, and industrial materials applications. This allows a licensor to grant multiple licenses in various fields of use, enabling the licensor to exploit its IP more effectively.

Product restrictions can also be included in a licensing agreement. This limitation restricts the licensee's use of the IP to a particular class of product. For example, a semiconductor company may license to a consumer electronics manufacturer the right to use its high-end, germanium semiconductors in its microprocessor products for use in personal computers, specifically laptops.

Example Incorporating a popular song into the background of a television commercial can help solidify the memory of the advertisement in a viewer's mind. If the viewer of the commercial has a positive association with the song, likes it, or thinks it is catchy, the viewer will be more inclined to remember the advertisement, associate positive feelings with it, and may even look forward to seeing the commercial again. When a marketing company makes an advertisement and uses a popular song, the marketing company must procure a license to use the sound recording of the popular song. The label company that owns the song may put restrictions on the use of its song. For instance, the label may limit the use of the song to only commercials for a single product line or may require that the song only be used for tasteful advertisements.

17.2.3 Considerations

Consideration between parties to a contract regarding intellectual property rights can take many forms, but usually involves some form of payment. The most common are a lump sum payment, a stream of royalty payments (most commonly based on the number of products sold), as well as a combination of both. A lump sum payment can be used in a number of circumstances, such as settlement of past infringement, or when the technology is being transferred and the licensor is going to be working in the same field. This type of royalty shifts the entire risk of success onto the licensee since the licensor receives payment no matter what happens. As a result, an up-front lump sum payment is often discounted from the amount that could be obtained by taking a stream of royalty payments over time based on the sales volume of the product.

In contrast, a stream of royalty payments over time based on the sales volume mitigates the risk that the licensee must take, because the licensee does not make any payments unless the product is selling. The licensor stands to receive a greater stream of royalty revenue if the product does well in commerce. A combination of some up-front lump sum payment to offset research and development costs incurred by the licensor along with a reduced stream of royalty payments is sometimes used to strike a balance for a licensor who wants some immediate payment and also wants to share in the success of the product.

Many licenses are structured so that a minimum royalty payment must be made during a given time period in order to maintain the license in force. This prevents a licensor from obtaining, for example, an exclusive license and then failing to take action to manufacture, advertise, or sell the product. Failure to meet minimum payments can act as a trigger for automatically changing a license from exclusive to non-exclusive, or for terminating the license.

Setting royalty rates is considered to be more of an art form than a science. While some reference materials are available that provide "typical ranges" of royalty rates for a particular field, each situation is unique and must be reviewed independently based on all of the available information, such as the predicted market size, ramp-up time, and whether production is capital-intensive. Additionally, the relative size and strength of the parties are often taken into consideration as well.

In addition to royalties, other non-monetary items may form the consideration. Cross-licenses may be obtained if both parties possess intellectual property rights that the other party desires. This may replace or offset some or all of the monetary consideration.

17.2.4 Maintenance of IP Rights

There are a number of terms that should be included in a license agreement that relate to the maintenance of the licensed intellectual property rights. For patent rights, this should include the requirement that the licensee includes the appropriate patent marking on any goods sold that are covered by the patent. Lack of patent marking can limit claims for damages against infringers. Depending on whether the license granted is an exclusive license, the licensor may also require the licensee to pay patent maintenance fees. In some situations, a licensee may even take over prosecution of pending patent applications, which may benefit the licensor especially in the situation where the licensor is an individual or has limited resources to prosecute the patent application.

In trademark licenses, in order for the licensor to maintain its trademark rights, the agreement should require that any goods and services using the trademark identify that it is being used under license from the licensor. Additionally, to maintain the mark, the trademark license should have provisions for inspecting any products that use the trademark to insure that the quality of the goods is consistent

with the licensor's standards. If a licensee does not maintain quality control over the usage of the trademark, not only can the licensor suffer damage due to poor quality goods being associated with the mark, but the trademark right can be lost.

17.2.5 Other Terms

License agreements will generally include a number of other terms, some of which are discussed below.

(i) Representations and warranties are typically included from the licensor to the licensee and should include a statement that the licensor is, in fact, the owner of the IP rights being licensed and has the right to grant the license. This offers some protection to the licensee from fraudulent transactions. The licensor should also warrant that they believe the IP rights to be valid and should identify any known challenges to the IP rights. While a licensee should conduct its own due diligence review of the IP rights being licensed, if the licensor fails to reveal this type of information, it can provide grounds for rescinding the license if the IP rights ultimately prove to be invalid.

(ii) A license will often include terms regarding ownership and/or cross-licensing of further developments, in what is often termed a grant-back provision. From the licensor's perspective, this can be important if the licensor is also producing a product under the IP rights and wants to have the benefit of any of the licensee's improvements, which are based on the licensor's underlying IP rights. From the licensee's perspective, having rights to improvements may eliminate the need for a further license relating to the same products or services being provided under the licensed IP rights.

(iii) The burden for obtaining regulatory approval, for example, from the Food and Drug Administration, should be designated in the license. For new product types, this can be a time-consuming process, and the burden for obtaining the required approvals should be specified. If the burden is placed on the licensee, this can be used as a negotiating point to obtain a reduced royalty, at least during the time it takes to obtain the approval.

(iv) In the event that the parties ultimately disagree over the meaning or enforcement of any provision in the license agreement, some form of dispute resolution should be included in the agreement. This should not only include a choice of law, but also a forum for any action or arbitration that will take place. In order to avoid the time and cost of a court proceeding, many agreements now call for binding arbitration of any dispute between the parties. A "loser pays" provision has also become standard in most license agreements to avoid meritless claims.

(v) A termination clause is also standard in any license agreement and should, in addition to setting any fixed or renewable term limits for the license, include a list of circumstances or actions that will result in automatic termination of

the license. Automatic termination will generally occur for non-payment of any royalties due, failure to launch or market the product within a predetermined time limit, or bankruptcy of the licensee. Termination may also occur for breach of any other terms of the license agreement, generally after a notice and cure period.

A sample license agreement, which includes many of the above items, is attached in Appendix B.

17.3 Cross-Licensing Intellectual Property

Cross-licensing occurs between two or more parties with symmetrical interests: A firm needs its competitor's patent just as badly as its competitor needs its patent. For example, the semiconductor industry utilizes cross-licensing frequently, with mutually beneficial results for the parties involved because the industry consists primarily of a limited number of players that produce similar products and hold similar IP portfolios. The same is true of the cell phone technology industry. Major players, such as Apple, Microsoft, Samsung, Nokia, and Research in Motion, are frequently in the news because of their newest IP portfolio cross-licensing deal.

Grant-back provisions in a cross-licensing agreement require the licensee to disclose and transfer back to the licensor any and all improvements that result from the licensee's use of the licensed technology during the licensing period. If there is no grant-back provision in the license agreement, the licensee could file improvement patents of its own, rendering the licensor's technology obsolete. It would be possible for the licensee to block the licensor from commercializing its own product if the licensee attempts to incorporate the licensor's improvements into the product.

Grant-backs can be exclusive, non-exclusive, or an assignment. Under an exclusive grant-back, the licensor is granted the exclusive right to use or sublicense any improvements created by the licensee. Conversely, the licensee retains merely a non-exclusive right to practice the improvements that it creates. In a non-exclusive grant-back provision, the licensee retains the title and rights to his or her improvements, but the licensor is allowed to practice the improvement as well. Under an assignment grant-back provision, the licensee must assign all rights and title of any improvements to the licensor. However, the licensee still retains a non-exclusive right to practice the improvement it was responsible for creating.

17.4 Licensing Standard-Essential Patents

Standard-essential technologies are those technologies on which an industry standard is built upon. The driving force behind developing industry standards is to promote the interoperability and compatibility of products manufactured by

multiple companies around a single technology. Some familiar examples of industry standards include VHS for videotapes, MP3 for digital music, and Blu-Ray technology for DVDs. Standard setting is typically accomplished and monitored by a standard development organization (SDO). Participation in a SDO is usually voluntary, and cooperation with the SDO provides companies with access to essential technologies, allows them to introduce and champion new technologies, and enables them to compete in the industry.

Industry standards exist to enable devices manufactured by many parties to work together, such as ethernet for a laptop and HDMI for flat screen TV. Wireless standards provide the foundation for the explosive growth seen recently in cellular communications and smartphone technology. These standards are promulgated by industry organizations such as the Institute for Electrical and Electronics Engineers (IEEE), European Telecommunication Standards Institute (ETSI), and the Third Generation Partnership Project (3GPP).

In most instances, participation in the SDO also carries the obligation that any IP rights owned by the participant must be offered for license to those who would like to implement the standard. For example, ETSI, the SDO that produced the universal mobile telecommunications system (UMTS) and long-term evolution (LTE) wireless cellular standards, has an IP rights policy that requires participants to offer licensing terms for patents that are standard-essential that are "fair, reasonable, and non-discriminatory" (FRAND). In its most basic form, a standard-essential patent is one that claims an invention that must be practiced in order to implement the standard. FRAND licensing policies help companies provide standard-essential technology to their customers without violating the IP rights of patent holders, and the policies also ensure innovators are compensated according to fair and reasonable terms for their contributions to the standard. FRAND policies also promote competition by lowering the barriers to entry into the market.

FRAND licensing exists primarily to prevent a SDO participant from placing patented technology into a standard and then excluding others from implementing the standard by enforcing the exclusionary rights of the patent. By requiring fair and reasonable licensing of standard-essential technology, no one participant of the SDO can influence the deployment of a standard. The FRAND policies also promote competition by providing ground rules for licensing agreements and fostering a cooperative environment for licensing negotiations.

An interesting issue of contention surrounding FRAND licensing obligations involves a patent holder's ability to seek injunctive relief against those who infringe standard-essential patents subject to FRAND licensing obligations. On the one hand, if FRAND licensing was offered but no agreement was reached, one of the exclusionary rights afforded patent owners is the ability to exclude someone from making, using, or selling the patented technology. Injunctive relief is a stick by which a patent holder can force a license or other settlement. On the other hand, a SDO participant who inserts patented technology into a standard, feigns attempts at FRAND licensing, then seeks injunctive relief will appear anti-competitive and at odds with the intent of many SDO intellectual property rights (IPR) policies.

The recent developments in SDO IPR policies and the uncertainty of injunctive relief have caused a shift as to where companies capture value from their patents. Standard-essential IPR, while still valuable as it must be practiced to implement a standard, is weighed down by FRAND and other IPR policy obligations of SDOs. In the current atmosphere, enforcement of patents on nonstandard-essential technology—i.e., the other aspects of the device that are not part of the standard—is of increasing importance to a company's patent strategy.

17.5 Licensing Code and Software

17.5.1 When a Startup Needs Software

There are a lot of businesses that need computer code or software in order to be successful, but they may not have the technical skills required to program their own code. This means that the startup needs to seek out a third party who can provide these services. The business might need proprietary code, customized code, or generic code, for the purposes of running their business, or for incorporation into their product. In order to get the necessary code or software, the company may need to procure it though a licensing agreement, more particularly a software licensing agreement. A software licensing agreement is a contract that governs how the licensee can use or redistribute the software.

When the company needs software for its own use, there are two ways to get the code: Either the code is available for free or open source, or the company purchases a license to use the necessary software from a software service provider.

Open-source code is programming code that is openly available for use by others, and in many cases, users can modify the code to suit their needs.

When open-source code is not an option, the company needs licensed software, also sometimes referred to as "closed source" or "proprietary" software. With these types of software, the person or entity that made the code retains control over the code, meaning that licensees cannot modify it. The license often takes the form of an end user license agreement, which gives the purchaser/licensee the right to use the software. A good example of software that would have an end user licensing agreement would be purchasing word-processing software, docket management software, or the code necessary to develop a customer support system or an online payment system for a Web-based platform that can all be accessed through a licensing agreement.

Alternatively, the company may choose to hire a contractor to build software for the company in a work for hire arrangement. In this situation, the company would not have to worry about licensing agreements since the rights to the software would belong to the company through the use of the software contractor's employment contract.

17.5.2 When Startup Sells or Develops Software

As a startup that has built software or an app, whether or not there is a need to consider developing licenses for the software or app will depend on how the software is made in the first place. How the software was made will determine which routes are available.

For instance, a startup that builds a program or application based on open-source code likely will not be able to control how others use their code in the future. Most open-source code comes with an open-source code license that often requires that the user releases his or her code, which is based on the open-source code, to others as a term of the license to use the open-source code. To say this another way, in order for a startup to use the open-source code to make their software or application, the startup must agree to a license that requires the startup to release the code that they develop as open source as well. Since the company's software is based on open source, and thus in turn will need to be released as open source, rather than making money by licensing the software, the company can instead make money by providing additional software services or support for their program.

When a startup company develops proprietary software, and the value of that software is derived from the proprietary nature of the software, the company should consider the value that licensing the software would have for the company. By retaining control to the program code, through the use of a licensing agreement, the company will have a competitive edge over competitors and customers/licensees will be prevented from depreciating or devaluing the company's software product by redistributing it or modifying it.

Chapter 18
Startup Tips for Avoiding and Preventing Intellectual Property Problems

Abstract Startups generally need a lot of guidance and advice as they progress through the various stages of growth and development. Startups can gain a lot of benefit from getting IP legal advice early on, and assessing what aspects of their IP strategy will generate the most value for the startup. A startup needs to truly understand the importance of procuring, maintaining, and enforcing intellectual property rights and should take time to educate itself and employees on its own IP rights and the IP rights of others in the same technical area as the startup. Knowing the IP rights of others can help the startup to avoid costly infringement litigation. Protecting the startup's intellectual property is critically important, and avoiding and preventing potential pitfalls and problems before they occur is a way to ensure that the business will run smoothly and will encounter as few hiccups and bumps as possible on the path to success.

18.1 Get Legal Advice Early

Too many startups drag their feet when it comes to hiring an intellectual property lawyer. The startup is reluctant to get a lawyer because lawyers can be expensive, and the experience of working with a lawyer could be new and overwhelming, especially if this is the first time the founders of a startup have ever worked with an attorney. Additionally, lawyers are often so serious about the possible legal consequences of every action the startup takes, which can be a daunting and discouraging attitude for a startup that derives a lot of its energy and motivation from its ideas.

However, having an IP lawyer is going to help protect your startup from potential pitfalls that might arise on your path to success. An IP lawyer may not be expensive, depending upon the specific needs of the startup. However, specific advice obtained at key points in the growth of startup may be invaluable. Isn't it better to avoid a problem in the first place than to stumble into a problem and then have to waste valuable time and resources to resolve the problem? An IP lawyer will help a startup in a number of ways, including:

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9_18

- Making sure that all of the intellectual property in the startup and created by employees of the startup is assigned to the startup company. The startup needs to own all of the relevant intellectual property rights associated with their business, so that no one else can undermine the startup's success by claiming a right to the startup's underlying intellectual property. Fights over ownership rights of corporate IP assets have been the demise of many startup companies.
- Making sure that the startup complies with the strict deadlines associated with filing for certain intellectual property rights.
- Providing advice regarding on when the time to file for intellectual property protection, and what type of intellectual property protection is best suited for a particular piece of intellectual property.

18.2 Conduct Cost-Benefit Analysis on IP Protections

The cost of procuring intellectual property can be expensive, and startups are often spend thrifty because of tight budgets at the early stages of development. Startups need to carefully consider their options when it comes to intellectual property protection. While some means for protecting IP is very affordable, as is the case for trade secrets and copyrights, trademarks and patents can be substantially more costly to secure. Each form of intellectual property protection offers its own benefits and risks, and these factors should be carefully weighed by a startup when determining the IP strategy of the startup.

It is intelligent for startups to conduct a cost-benefit analysis of their options when two forms of IP protection are available for a particular intellectual property aspect of the startup. For instance, if a startup has some intellectual property that could be protected by keeping it as a secret (i.e., as a trade secret) or by means of patent protection, the startup must make a choice between one form of IP protection over the other, as patent protection and trade secret protection are mutually exclusive. The costs of each option need to be weighed against the potential risks associated with each option.

18.3 Do Things Correctly at the Outset

The heart and soul of a startup are the intellectual property rights that protect the startup's product, services, and brand. Startups can avoid a lot of future headaches and legal troubles by researching and doing things related to their intellectual property protection correctly at the outset. When it comes to building your startup, having your intellectual property strategy planned out, your IP assignments in place, and your IP applications completed correctly and timely, you can better protect the intellectual property rights of your startup.

18.3.1 Protecting the IP You Have

Startups usually start because of an idea. The idea might be documented as design drawings, sketches, or prototypes, and these pieces of intellectual creation form the basis for the intellectual property rights that belong to the startup. If your startup has a company name, invention, or software code that makes up the core product or brand of the company, it is important to seek the appropriate legal protection for this intellectual property as soon as possible whether the appropriate protection is patents, trademarks, copyrights, or trade secret protection.

The startup should assign any and all IP related to the startup, including IP developed by the founders. The same should be done with any IP developed by non-founders, employees, independent contractors, and other third parties that contribute to the intellectual property development of the startup.

18.3.1.1 Registering IP

One of the first things a startup should do is to register the company name for trademark protection and register the corresponding domain name for their startup. Registration of IP creates an exclusive right in the intellectual property, and no one else is allowed to use the registered IP without the permission of the startup.

Taking trademark protection, for example, while a company automatically gets trademark protection as a matter of common law simply by using their mark in commerce, protection without federal registration of the trademark with the United States Patent and Trademark Office (USPTO) provides only limited, regional protection. Federal registration will provide nationwide protection against others using your trademark without permission. Consumers will come to associate your trademarks with your startup brand, and federal registration discourages and prevents others (i.e., competitors and copycats) from cashing in on your startup's brand. And even if some other entity tries to use your startup's trademark, federal registration allows your startup to seek injunctions, damages, and other forms of recovery when others' use your startup's trademark without authorization.

18.3.1.2 Applying for Patent Protection

Thanks to the Leahy-Smith America Invents Act, the USA is the first to file patent system, which means that inventors are "in a race" to file their patent application with the USPTO in order to establish their claim to the invention. There are strict rules regarding disclosure of an invention to the public and seeking patent protection. If a startup makes a disclosure, presentation, or demonstration of their invention to the public, through a conference, lecture, or some other public demonstration (e.g., the startup presents their invention on an investment pitch TV show), the startup has one year to file a patent, or else the right to seek patent

protection for that invention will be lost. Understanding the patent application filing timelines and procedures is important for a startup trying to maximize the value of their IP while minimizing the startup's risk of losing the potential value that is contained in their intellectual property.

18.3.1.3 Use Contracts with Clear Clauses that Protect Your IP

Startups should use contracts to manage their business relations with everyone involved in the development of the startup. Founder agreements, non-founder contracts, employment contracts, independent contractor agreements, non-disclosure agreements, vendor and supplier contracts… every single contract made with a person or entity that will have access to the startup's intellectual property, or will contribute to the startup's intellectual property, needs to include clear clauses addressing the confidentiality of the startup's IP and the assignment of any IP to the startup. The goal of these contract clauses is to ensure that there is no question as to the ownership of any and all IP related to the startup. It all belongs to the startup.

18.3.2 Evaluate What IP Procurement Offers the Most Value

Since startups often have strict budget constraints, a startup might have to think long and hard about prioritizing their IP procurement efforts. Which intellectual property rights should the startup pursue first? A good strategy is to consider the options that are available to the startup, and determine which avenue of IP protection is going to provide the startup with the most value. This is a strategic decision that will differ from startup to startup.

For instance, procuring trademark protection for the company name, registering a domain name, and securing patent protection for an invention that is critical to the success of the startup, are each IP procurements that carry a lot of value for the startup. On the other hand, seeking trademark protection for the product name of every prospective product the startup has planned might not make very much sense or carry much value for the startup if those product lines are not fully developed in the future. A product line could fall apart in the development stage, a vendor might go out of business, or consumers might not respond well to market testing and the startup might have to scrap the whole product line. Expending money and time on procuring IP rights that do not hold much value for the startup at the early stages of development is wasteful. Prioritize what IP rights to procure first and save the procurement of less important IP rights for later.

18.4 Take IP Protection, Policing, and Enforcement Seriously

18.4.1 IP Is Important, so Is Running Your Startup

A struggling startup needs to strike a balance between financing normal business operations and financing the procurement, maintenance, and enforcement of their IP rights. As discussed in earlier chapters of this book, IP procurement, maintenance, and enforcement can be costly in terms of resources, capital, and time. Yet, having secure and enforceable intellectual property rights could be a matter of life or death for a startup. IP rights are the strongest line of defense that a startup has against competitors, keeping competitors from stealing the startup's product, ideas, and brand.

While IP is critically important to a startup, the startup cannot neglect its normal business operations, or sacrifice operating capital that is earmarked for running the business. Juggling an IP strategy while maintaining a startup can be challenging, but well worth it in the end if the startup grows into a successful business.

18.5 Do not Infringe Others' IP Rights

Intellectual property litigation is one of the most costly things that can happen to a startup. Thousands if not hundreds of thousands of dollars could be lost in an infringement suit, and not only that, but when a startup is involved in infringement litigation, it can scare away potential investors.

In order to avoid infringement litigation, startups should avoid infringing on the IP rights of others in the first place. It is good practice for startups to gather intelligence on competitors' intellectual property portfolios so that the startup has a good understanding in terms of where their competitors stand, and the startup can focus on how to differentiate itself from those competitors. It is also a good practice to develop a thorough understanding about the intellectual property landscape for the particular technical area that the startup is involved in. Mapping the intellectual property of others can help a startup to develop a strategy for avoiding the inadvertent infringement of the intellectual property rights of others.

Additionally, if a startup needs access to intellectual property rights held by another, it is important that the startup identifies the owner of those rights and requests permission to use the intellectual property from the rightful owner. Deals can be struck, and licenses can be obtained that permit the startup to use the IP it needs, without trouncing on the rights held by others.

An ounce of prevention is better than a pound of cure when it comes to avoiding IP infringement. The startup's focus needs to be on growing a strong, well-protected business that investors want to be a part of and that consumers need. Taking specific, strategic steps to avoid infringement litigation at the outset will save the startup a lot of potential headache and frustration in the long run.

18.6 Prevent Contamination of IP Rights

Contamination of IP rights is something that can occur when a startup engages in collaboration with some other party and that party contributes to the startup's IP in a meaningful way, but no protections were in place to protect the startup. For example, no contract clauses were in place to grant all IP to the startup. Effectively, the third party contributed to the startup's IP and thus stakes an ownership claim for their contribution. To think of this another way, the third party is contaminating the startup's IP rights.

A startup can greatly reduce its risk for IP contamination by executing contracts with any and all third parties that specifically address the issue of intellectual property transfer to the startup. By entering into express agreements with third parties concerning the ownership of any intellectual property that might be the byproduct of collaboration between the startup and the third party, the startup can protect its intellectual assets and avoid costly disputes over ownership of the intellectual property.

Appendix A

PRELIMINARY INVENTION DISCLOSURE

It is important to have complete, accurate information about the inventor(s) and the invention. If you have any doubts about any information, include it. Every applicant for a patent is under a duty to advise the U.S. Patent and Trademark Office about all known prior art. Use additional sheets of paper if necessary. If you have any questions, please get in contact with us. Mail and/or fax this form to:

Volpe and Koenig, P.C.
Counselors at Law
United Plaza, Suite 1800
30 South 17th Street
Philadelphia, PA 19103

Telephone: (215) 568-6400 Fax: (215) 568-6499

(1) Title of Invention:

(2) Description of the Invention:

(3) First written description of the invention was made by:
Date:

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9

(4) First drawing of the invention was made by:
Drawing No.: Date:

(5) First model was made by:
Date:

(6) Invention was first disclosed to:
Date:

(7) First effort to sell the invention:
Date:

(8) First use of invention:
Date:

(9) Description of circumstances(s) and date(s) of any disclosure(s) that are not described above:

(10) If you know of other products, processes or machines like yours, describe them and how your invention differs from them.

(11) Identify any known patents and/or other publications which relates to your invention. (Attach copies, if available.)

(12) In the case of a process invention, has a product ever been made by the new process? Yes__ No__. If yes, has the product ever been offered for sale, sold, or used? Yes__ No__. If yes, please describe the circumstances with dates.

(13) If anyone other than a named inventor had anything to do with this invention, state the person(s) full name, company affiliation, address and title and describe that involvement.

(14) If this invention is assigned or is to be assigned, identify the assignee.

Inventor:_____ Inventor:_____
(Print full name) (Print full name)

Citizenship:_____ Citizenship:_____

Home Address:_____ Home Address:_____
_____ _____
_____ _____

Telephone No.:( ) - Telephone No.: ( ) -

Appendix B

DRAFT AGREEMENT

This Agreement made this _____ day of _____, 2013 by and between Sam's Startup, Inc., a Pennsylvania corporation, having a place of business at _____ (hereinafter "SAM'S STARTUP") and Capitalizing Startup Tech., Inc., a Delaware corporation, having a place of business at _____ (hereinafter "CAPITALIZING").

WHEREAS, SAM'S STARTUP has developed a product (hereinafter "the SAM'S STARTUP Product") intended for distribution and sale in a nationwide market and has expertise in producing such product; and

WHEREAS, CAPITALIZING has a nationwide distribution network and is a manufacturer and distributor of similar types of products and is desirous of obtaining the SAM'S STARTUP product and know-how as well as the right to manufacture, distribute and sell the SAM'S STARTUP Product;

NOW, THEREFORE, in consideration of the above and of the mutual covenants and obligations contained herein, and intending to be legally bound, the parties hereto agree as follows:

1. DEFINITIONS

l.l "Licensed Goods" shall refer to SAM'S STARTUP's Semiconductor product as described in SAM'S STARTUP's U.S. Patent Application No. XX/XXX,XXX.

1.2 "Licensed Territory" shall mean North and South America.

1.3 "Affiliate", with respect to either party, shall mean any person or entity who controls, is controlled by, or is under common control with a party to this agreement, and includes, but is not limited to, parent corporations, subsidiaries, and sister corporations.

1.4 "Net Selling Price" is the gross selling price (*i.e.*, the dollar amount) actually paid to and collected by CAPITALIZING in a bona fide arms-length transaction consummated or intended to be consummated by transferring title in a Licensed Good, less:

(a) returns actually credited;

(b) actual losses experienced by CAPITALIZING as a result of credits issued for such things as expired shelf life; and

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9

(c) shipping charges separately charged to transferee;

however, no deduction shall be made for any other costs incurred, such as, but not limited to, costs of manufacture, sales, distribution, or exploitation of the Licensed Goods.

2. LICENSE

2.1 SAM'S STARTUP hereby grants CAPITALIZING and Affiliates a sole license for the manufacture, distribution and sale of the Licensed Goods in the Territory. SAM'S STARTUP will provide technological support and know-how to manufacture the Licensed Goods to CAPITALIZING.

3. ROYALTY

3.1. CAPITALIZING agrees to pay a royalty to SAM'S STARTUP of ____ percent (_%) on the Net Selling Price of the Licensed Goods. Royalties shall be payable on sales made during the period starting on the date of this agreement and ending on January 1, 2014, and for each annual period following therefrom, during the term or extended term of this agreement.

3.2. Royalty payments made under this agreement shall be made within sixty (60) days after the end of each quarterly period during the term of this agreement.

3.3. CAPITALIZING agrees to submit to SAM'S STARTUP within sixty (60) days after the end of each quarterly period a written royalty report setting forth the amount of royalties due for the preceding quarterly period and the manner in which CAPITALIZING calculated said royalties. CAPITALIZING agrees to keep complete records covering all royalty-bearing activities specified in this agreement in sufficient detail under its current accounting to enable the royalties payable hereunder to be determined and verified.

4. AUDITS

4.1. The parties hereby agree that SAM'S STARTUP shall be permitted, at SAM'S STARTUP's expense, to have a mutually agreed upon independent certified public accountant audit each royalty report submitted by CAPITALIZING to SAM'S STARTUP, within six (6) months from the date it is received by SAM'S STARTUP. CAPITALIZING shall make its records available to said accountant and cooperate by providing all available records essential to the verification of the report being audited and said accountant shall maintain confidential all information learned in the course of examining CAPITALIZING's records, with the exception of a report to SAM'S STARTUP with the accountant's findings as directly related to CAPITALIZING's obligations to make royalty reports and payments. In the event of a finding by such accountant of a material variance with the report issued by CAPITALIZING, then CAPITALIZING shall reimburse to SAM'S STARTUP the audit costs paid to the accountant and pay to SAM'S STARTUP any additional royalties determined to be due.

5. PATENTS

5.1. Should CAPITALIZING obtain information that any patents owned by SAM'S STARTUP are or may be infringed, it shall provide such information to SAM'S STARTUP, but shall have no further responsibility or obligation. Any patents obtained by CAPITALIZING relating to the Licensed Goods or improvements to the Licensed Goods shall be the property of SAM'S STARTUP.

CAPITALIZING shall promptly review any papers and execute, acknowledge and deliver all such papers as may be necessary or desirable, in the sole discretion of SAM'S STARTUP, to obtain or maintain patent protection for the Licensed Goods and to confirm the ownership of any such patent by SAM'S STARTUP.

6. TRADEMARKS

6.1. CAPITALIZING shall use the trademark "SAM'S STARTUP SUCCESS", in such form as specified in writing by SAM'S STARTUP, on the Licensed Goods in the Licensed Territory. CAPITALIZING shall also use in connection with the trademark a "™" or, where U.S. Federal Trademark Registration has been obtained, an "®". Once approved, CAPITALIZING shall not depart from the approved form of the "SAM'S STARTUP SUCCESS" mark on any materials requiring approval without the approval of SAM'S STARTUP in accordance with paragraph 6.4 of this Agreement.

6.2. In order to assure the development, manufacture, appearance, quality and distribution of the Licensed Goods is consonant with the quality of the trademark, SAM'S STARTUP retains the right to review the Licensed Goods.

6.3. CAPITALIZING shall submit to SAM'S STARTUP for approval samples of all Licensed Goods prior to any distribution or sale thereof by CAPITALIZING.

6.4. Any such submission of the Licensed Goods for approval which is not disapproved within fifteen (15) days shall be deemed approved. Any disapproval by SAM'S STARTUP shall be submitted to CAPITALIZING in writing within the aforesaid fifteen (15) days together with remedial changes, which would remedy such disapproval.

7. ENFORCEMENT

7.1 If SAM'S STARTUP obtains patent protection for the Licensed Goods, and any such patent is infringed by a third party, CAPITALIZING and SAM'S STARTUP may take appropriate action to suppress such infringement. As patent owner, SAM'S STARTUP shall have the first right, but not the obligation to take action. In the event that SAM'S STARTUP takes action against an alleged infringer, SAM'S STARTUP shall be entitled to the entire recovery. If CAPITALIZING requests SAM'S STARTUP in writing to suppress any infringement, identifying in the request the infringer and the circumstances of the infringement, and SAM'S STARTUP fails to file suit against the identified infringer or to otherwise take action to cause the identified infringement to cease within sixty (60) days of CAPITALIZING's request, CAPITALIZING shall have the right to file suit against and to negotiate and enter into a settlement with the identified infringer. If CAPITALIZING files suit, SAM'S STARTUP is under no obligation to bear any cost of the suit. SAM'S STARTUP, at CAPITALIZING's expense, shall join in the suit and render assistance and sign all papers, as may be reasonably required in connection with such enforcement. SAM'S STARTUP shall be entitled to 20 % of any court awarded or lump sum recovery, less costs, as a result of any enforcement of such patents by CAPITALIZING.

7.2 If CAPITALIZING becomes aware of a third party infringement of the "SAM'S STARTUP SUCCESS" mark in connection with electronics products in

the Licensed Territory, CAPITALIZING shall provide notice and the details of such infringement to SAM'S STARTUP, and SAM'S STARTUP shall take appropriate action to suppress such infringement.

8. TECHNOLOGICAL SUPPORT, QUALITY CONTROL AND PERFORMANCE ASSURANCE TESTING

8.1 SAM'S STARTUP shall provide instructions and know-how for the production of the Licensed Goods.

8.2 SAM'S STARTUP and CAPITALIZING agree to jointly develop a Quality Assurance Plan to meet all applicable agency regulations and certifications for the Licensed Goods. CAPITALIZING shall test each production batch of the Licensed Goods and shall maintain test records in accordance with the Quality Assurance Plan.

9. PRODUCT LIABILITY AND WARRANTY CLAIMS

9.1. CAPITALIZING shall assume all liability for all claims of any nature with respect to the Licensed Goods distributed or sold by CAPITALIZING. CAPITALIZING hereby agrees to indemnify, defend and hold SAM'S STARTUP harmless, from and against any loss, liability, damages and expenses (including reasonable attorney's fees and expenses) which may be incurred or for which SAM'S STARTUP may be obligated to pay or for which SAM'S STARTUP may become liable or be compelled to pay in any action, claim or proceeding against CAPITALIZING and/or SAM'S STARTUP for or by reason of any acts, whether of omission or commission, that may be claimed to be or are actually committed or suffered by CAPITALIZING in connection with CAPITALIZING's performance of this agreement. The provisions of this paragraph and the obligations under the same shall survive the expiration of this agreement. CAPITALIZING shall maintain and procure at CAPITALIZING's expense a comprehensive general liability policy including, but not limited to, contractual advertising and products liability coverage's with a policy limit of not less than $_____ million per occurrence. Such policy shall be in full force during the entire term of this agreement and shall be placed with a responsible insurance carrier and shall name SAM'S STARTUP as an additional insured and provide for at least thirty (30) days prior written notice to SAM'S STARTUP of the cancellation or modification of such policy.

9.2. In the event that CAPITALIZING does not obtain and maintain the aforesaid policy continuously in effect, upon prior written notification to CAPITALIZING, SAM'S STARTUP may obtain such insurance policy on behalf of CAPITALIZING. All premiums for such insurance policy shall be deducted from royalties due under paragraph 2 of this agreement.

10. TERM AND TERMINATION

10.1. This agreement will have an initial term of seven (7) years from the execution date.

10.2. This agreement shall automatically be renewed for subsequent five (5) year terms, subject to the right of either party to terminate upon written notice one (1) year prior to the expiration of the initial term or any subsequent renewal term.

10.3 Notwithstanding the aforesaid, this agreement shall be subject to the rights of earlier termination by the party indicated as hereinafter set forth:

(a) By SAM'S STARTUP in the event that CAPITALIZING fails to make royalty payments following ten (10) days prior written notice and demand to cure from SAM'S STARTUP; provided, however, if CAPITALIZING cures such default within the ten (10) day period then such notice shall be of no force and effect; or

(b) By either party in the event that the other party breaches any other material obligation imposed upon it under this Agreement and fails to cure such breach within a period of thirty (30) days after notice and demand for cure from the party not in breach; provided, however, if the defaulting party cures its breach within the thirty (30) day period, then such notice shall be of no force and effect; or

(c) By either party immediately upon the other party becoming bankrupt, insolvent, making an assignment for the benefit of creditors, applying for or consenting to the appointment of a trustee or receiver or if bankruptcy proceedings are instituted against CAPITALIZING.

11. RESOLUTION OF DISPUTES BETWEEN THE PARTIES

11.1. This agreement shall be deemed entered into the Commonwealth of Pennsylvania and shall be construed and governed solely by the laws of Pennsylvania.

11.2 In the event of any dispute, difference or question arising between the parties in connection with this Agreement or any clause or the construction thereof, then and in every such case, unless the parties concur to the appointment of a single arbitrator, the difference shall be referred to three (3) arbitrators; one to be appointed by each party, and the third being nominated by the two so selected by the parties, or if they cannot agree on a third, by the American Arbitration Association. In the event that either party within one month of any notification made to it of a demand for arbitration by the other party, shall not have appointed its arbitrator, such arbitrator shall be nominated by the American Arbitration Association. The arbitration shall take place in Philadelphia, Pennsylvania. The arbitrators must base their decision with respect to the difference before them on the contents of this Agreement and the attachments thereto, and the decision of any two of the three arbitrators shall be binding on both parties. The arbitrators shall apply the law of the Commonwealth of Pennsylvania.

12. PUBLIC STATEMENTS. Any public statements or publicity concerning the existence or contents of this Agreement shall be subject to review and approval by the other party. SAM'S STARTUP and CAPITALIZING will consult with each other concerning the means by which customers and potential customers shall be informed of this Agreement.

13. GOVERNMENTAL APPROVALS. CAPITALIZING will at its own expense apply for and obtain the approvals of such governmental and regulatory entities as necessary to the marketing and sale of the Licensed Goods in the Territory. SAM'S STARTUP will furnish necessary technical support to assist in obtaining any such approvals.

14. GENERAL PROVISIONS

14.1 This agreement sets forth the entire agreement and understanding between the parties hereto relating to the subject matter hereof, and supersedes any prior or

contemporaneous oral or written representations, inducements or promises not contained herein.

14.2 No amendment or modification of this agreement shall be valid or binding unless the same shall be made in writing and signed on behalf of each party by a duly authorized representative.

14.3 This Agreement and all rights and obligations herein shall be binding upon and inure to the benefit of and be enforceable against the parties and their successors or assigns. SAM'S STARTUP and CAPITALIZING shall make no assignment, pledge or hypothecation of this agreement or its performance thereunder without the express written permission of SAM'S STARTUP and CAPITALIZING.

14.4 The failure to enforce any of the terms and conditions of this agreement by either of the parties hereto shall not be deemed a waiver of any other right or privilege under this agreement or waiver of the right thereafter to claim damages for any deficiencies resulting from any misrepresentation, breach of warranty, non-fulfillment of any obligation of any other party hereto.

14.5 If any term or provision of this agreement is held to be invalid or unenforceable by reason of any rule of law or a public policy, this agreement shall be deemed amended to delete the term or provision so held to be invalid or unenforceable therefrom and all other remaining terms and provisions of this agreement shall remain in full force and effect. Provided, however, if the invalid or unenforceable provision contains a material term or condition of this Agreement then either party shall have the right to terminate upon five (5) days prior written notice following the determination of such invalidity or unenforceability. If any provision is inapplicable to any circumstance, it shall nevertheless remain applicable to all other circumstances.

15. NOTICE

15.1 Any notice or statement by any party shall be deemed to be sufficiently given when sent by receipted facsimile with a copy by prepaid, trackable overnight delivery, to the notified party at its address set forth above and to its counsel. These addresses shall remain in effect unless another address is substituted by written notice.

[Add Names and Addresses]

In witness whereof, the parties hereto have caused this agreement to be signed, sealed and delivered on the date indicated above.

Capitalizing Startup Tech., Inc.

Date	BY:
	Name:
	Title:

Sam's Startup, Inc.

Date	BY:
	Name:
	Title:

Appendix C

ASSIGNMENT

Startup Steve, residing at _____, a citizen of the United States (hereafter the undersigned), is the inventor of _____ for which the undersigned executed an application for United States Letters Patent, U.S. Patent Application No. _____, filed, 201__.

The undersigned hereby authorizes assignee or assignee's representative to insert the Application Number and the filing date of this application if they are unknown at the time of execution of this assignment.

Sam's Startup, Inc., a Delaware Corporation, having a place of business at _____, (hereafter referred to as the assignee), is desirous of acquiring the entire right, title and interest in said invention, all applications for and all letters patent issued on said invention.

For good and valuable consideration, the receipt and sufficiency of which is acknowledged, the undersigned, intending to be legally bound, does hereby sell, assign and transfer to the assignee and assignee's successors, assigns and legal representatives the entire right, title and interest in said invention and all patent applications thereon, including, but not limited to, the application for United States Letters Patent entitled as above, and all divisions and continuations thereof, and in all letters patent, including all reissues and reexaminations thereof, throughout the world, including the right to claim priority under the Paris Convention or other treaty.

It is agreed that the undersigned shall be legally bound, upon request of the assignee, to supply all information and evidence relating to the making and practice of said invention, to testify in any legal proceeding relating thereto, to execute all instruments proper to patent the invention throughout the world for the benefit of the assignee, and to execute all instruments proper to carry out the intent of this instrument.

The undersigned warrants that the rights and property herein conveyed are free and clear of any encumbrance.

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9

EXECUTED under seal on this _____ day of , 201__ at

_____.

(Place)

Witness:

_____ _____(L.S.)
Startup Steve

State of

ss.

County of

On this _____ day of _____, 201__ before me personally appeared Startup Steve, to me known to be the person described herein and who executed the foregoing instrument, and acknowledged that he executed the same knowingly and willingly and for the purposes therein contained.

Witness my hand and Notarial seal the day and year immediately above written.

_____
Notary Public

My Commission Expires:

Appendix D

CONFIDENTIAL DISCLOSURE AGREEMENT

This Agreement made by and between SAM'S STARTUP, having an address of _____, and BIG-COMPANY, having an address of_____.

WITNESSETH THAT:

WHEREAS, SAM'S STARTUP has developed a new semiconductor product, (hereinafter referred to as "the invention"), and is in possession of certain related confidential and proprietary information (hereinafter referred to as "proprietary information");

WHEREAS, SAM'S STARTUP is interested in disclosing the invention and proprietary information to BIG-COMPANY, in confidence, for further evaluation for product production and distribution rights; and

WHEREAS, BIG-COMPANY is interested in receiving such information, in confidence, for conducting such further evaluation.

NOW, THEREFORE, for and in consideration of the foregoing premises, and of the mutual promises set forth below and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties, intending to be legally bound, hereby agree as follow:

1. SAM'S STARTUP agrees to disclose to BIG-COMPANY in confidence proprietary information relating to the invention.

2. BIG-COMPANY agrees to accept and hold in confidence any and all proprietary information disclosed by SAM'S STARTUP under this Agreement, except:

(a) information which at the time of disclosure can be shown to have been in the general public knowledge;

(b) information which, after disclosure, becomes part of the public knowledge by publication or otherwise, except through breach of this Agreement by BIG-COMPANY;

(c) information which BIG-COMPANY can establish by competent proof was in its possession at the time of disclosure by SAM'S STARTUP and was not acquired, directly or indirectly, from SAM'S STARTUP; and

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9

(d) information which BIG-COMPANY receives without restriction from a third party, provided that such information was not obtained by said third party, directly or indirectly from SAM'S STARTUP.

3. BIG-COMPANY agrees that the proprietary information received from SAM'S STARTUP shall not be used by BIG-COMPANY, other than for evaluation and consideration for use as noted above and as otherwise agreed between SAM'S STARTUP and BIG-COMPANY.

4. This Agreement shall not be construed as granting any license or any other rights to BIG-COMPANY.

5. BIG-COMPANY agrees to restrict access to the proprietary information to those employees, agents and representatives who are engaged in that actual evaluation of the invention on a need-to-know basis and will require all such employees, agents and representatives to agree to maintain the proprietary information in confidence.

6. BIG-COMPANY agrees that any improvements or modifications developed by BIG-COMPANY in connection with the invention shall belong to SAM'S STARTUP, and BIG-COMPANY shall assign all rights in any such improvements or modifications to SAM'S STARTUP.

7. Upon completion of its evaluation, BIG-COMPANY agrees to return to SAM'S STARTUP all information concerning the invention, including all photographs, diagrams, drawings, descriptions, prototypes, and notes, and any copies thereof.

This Agreement shall be binding upon and shall inure to the benefit of and be enforceable by and against the respective heirs, legal representatives, successors, assigns, subsidiaries, and affiliated or controlled companies of the parties hereto.

This Agreement shall be construed, interpreted and applied in accordance with the law of the State of _____. With respect to the subject matter of this Confidential Disclosure Agreement, the foregoing constitutes the entire and only understanding between the parties, and this Confidential Disclosure Agreement supersedes any prior or collateral agreements or understandings between the parties with respect to confidentiality.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the last date written below.

BIG-COMPANY

Date:_____ By: _____
Name:
Title:

SAM'S STARTUP

Date:_____ By: _____
Name:
Title:

Index

G.B. Halt Jr., et al., *Intellectual Property and Financing Strategies for Technology Startups*, DOI 10.1007/978-3-319-49217-9