



INTELLECTUAL PROPERTY GUIDE

PATENTS, TRADEMARKS & COPYRIGHTS



A Resource Tool for NC's Businesses and Inventors

Published by the University of North Carolina's Small Business and Technology Development Center

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INTELLECTUAL PROPERTY GUIDE

PATENTS, TRADEMARKS & COPYRIGHTS

This publication is published by the North Carolina Small Business and Technology Development Center. It is intended for the independent inventor or small company with little knowledge of how to develop new ideas into licensable patents or commercial products. In this guide, we try to answer the most common questions and provide guidance on commercializing an invention. In addition, this guide includes information about trademarks and copyrights.

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INTRODUCTION

This *Intellectual Property Guide* is intended to help small businesses and inventors in the development of their inventions and in the maintenance of their intellectual property rights. Maybe you've already developed an invention. What will you do next? Apply for a patent? Contact manufacturers? Start manufacturing it yourself? These questions must be carefully considered in order to get the full benefit of the efforts put into developing an invention. The purpose of this guide is not to discourage you from proceeding with any particular option, but to educate you about different ways to proceed with your idea and the potential time and financial investments that may be involved. This guide will educate you about patents and provide helpful references and sources of assistance that you may need in order to be successful. We emphasize the utilization of resources at local libraries, universities, and on the Internet. In addition, this guide explores trademark and copyright issues and the protection of internet domain names.

There are lots of new ideas every year, but only about *one patent out of a hundred* is commercially successful. Although utility patents and plant patents last 20 years from the date of filing the patent application, and design patents last 14 years from the grant of the patent, a new product may only have a few years of commercial life before a better invention replaces it. Usually, this means there is little time to recoup the financial investment made developing and patenting the invention. This financial investment typically includes thousands of dollars spent developing prototypes and obtaining patent protection. Manufacturing and marketing costs may increase this financial investment by tens of thousands of dollars.

It's one thing to invent for fun, it's an entirely different matter to obtain a patent, sell the product to a company, or start a business based on the invention. Proceeding with any of these options can quickly become time consuming, costly and overwhelming. In order to be successful, you must be prepared to accept the responsibilities and challenges that arise.

A trademark is used to protect recognizable names, logos, or symbols associated with particular goods or services. Federal registration of a trademark is encouraged in order to be certain that competitors are prevented from using the same or a similar name, and thus reap the benefits of the good reputation associated with your goods or services. Copyright protection is available by federal laws for various works of authorship, including, but not limited to, literary, dramatic, musical, and artistic works; even computer software can be protected by copyright. Although federal copyright protection is automatically granted once the work is put in a tangible medium of expression, the owner of a registered copyright receives additional legal rights plus stronger proof of the time of authorship. This guide will also explain how to register Internet domain names.

As stated above, this *Intellectual Property Guide* is intended for the independent inventor or small business with little knowledge of how to develop ideas into licensable patents or commercial products. This booklet endeavors to answer the most common questions and provide guidance on commercializing an invention.

Chapter 1

GENERAL PATENT INFORMATION

What Is A Patent?

A patent is essentially a set of rights that allows a patent owner to exclude, for a limited time, others from making, using, offering for sale, or selling the patented invention throughout the United States, or importing/exporting the invention to/from the United States. Additionally, in the case of patented processes, discussed below, the patent owner has the right to exclude others from using, offering for sale, or selling throughout the United States, or importing/exporting to/from the United States, products made by that process.

There are three different types of patents a person can acquire:

Utility patents may be granted to anyone who invents a process, machine, article of manufacture, or composition of matter that is new, nonobvious and useful. In addition, utility patents may be granted on any new and useful *improvement* of a process, machine, article of manufacture, or composition of matter. Machines, articles of manufacture, and compositions of matter are easy to recognize. They are things such as pencil sharpeners, engines, computers, and pharmaceutical drugs. A process can be more difficult to recognize—it can be a surgical procedure or a process for manufacturing a chemical. A process patent may also be granted on a new way to use unpatentable material. Utility patents are granted for a term beginning on the date the patent issues and ending twenty years from the effective filing date of the patent application.

Design patents may be granted to anyone who invents a new, original, and ornamental design for an article of manufacture. It only protects the *appearance* of an article, not its structure or utilitarian features; for example, a design patent could protect the appearance of a piece of furniture, but not its structure. These patents are granted for a term of 14 years beginning on the date the patent issues.

Plant patents may be granted to anyone who invents or discovers and asexually reproduces any distinct and new variety of plant. Plant patents will not be granted for a tuber propagated or a plant found in an uncultivated state; for example, no patents are granted for potatoes or for a plant found in the wilderness. Plant patents are granted for a term that begins on the date the patent issues and ends twenty years from the filing date.

For certain delays attributable to the U.S. Patent & Trademark Office (USPTO), the term of the patent may be extended, but in no case will such an extension be more than 5 years. Generally, a patent affords protection against infringement only within the jurisdiction of the government by which it is issued. Therefore, it is necessary to take out a patent in each country for which patent protection is desired by using the proper steps for international patenting.

Patent Contents

Every patent contains: (1) a short title of the invention; (2) a grant to the patentee of the right to exclude others from making, using, offering for sale or selling the invention throughout the United States or importing the invention into the United States (in the case of a process patent: the right to exclude others from using, offering for sale or selling throughout the United States, or importing into the United States, products made by that process); (3) a specification with claims; (4) drawings, if necessary.

The patent **specification** must contain: (1) a detailed description of the invention; (2) claims to the invention; (3) abstract of the disclosure; and (4) the inventor's oath or declaration. The application must state particularly what the inventor believes is the invention. An application must contain sufficient detail for a person of ordinary skill in the art to practice the invention. The best mode requirement requires the inventor to disclose the best mode of carrying out the invention known to him or her at the time of filing. Due to changes to the patent system, best mode disclosure is still a condition of patentability, but an infringer cannot use the absence of best mode as a legal defense. Disclosure of the best mode is still required when filing a patent application.

The **claims** are the most important part of the patent application because they set forth the exact bounds of the invention in much the same way a property deed sets forth the exact bounds of a plot of land. Thus, the claims describe the perimeter of the invention.

The oath or declaration must be signed by the inventor stating that: (1) they believe themselves to be the true, original and first inventor(s); (2) they have reviewed and understand the contents of the application; and (3) they acknowledge their duty to disclose all information known to be material to patentability of the application. An oath must be notarized. A declaration is a statement with a warning that willfully false statements are punishable by law and may invalidate any subsequent patent if issued. Generally, the USPTO prefers declarations because the notary seal on an oath is difficult to scan for purposes of e-filing.

Obtaining a Patent

Patents are obtained by filing an application with the USPTO in Alexandria, VA. A specially-trained USPTO patent examiner evaluates the application, and a patent is granted if the USPTO requirements are met. The process of obtaining a patent is described in detail in Section 3.

Conditions for a Patent

As previously stated, a utility patent must be novel, useful, and nonobvious. Design and plant patents have slightly different requirements; substantive discussion of patent issues in this guide will focus on utility patents.

Novelty – An invention must be novel in order to be patented. That is, a patent is barred if the invention has been anticipated by certain events that may occur prior to invention or the filing of an application. Such events are **prior art**. Prior art may be an act—an offer for sale, a use of the invention, a prior invention, or it may be a document—a prior foreign patent or publication, or it may be a United States patent. Such prior art can prevent you from obtaining a patent only if it is the same as the claimed invention, *i.e.*, it has all the elements and limitations of a given patent claim.

Pertaining to novelty, under the new U.S. Patent law, effective March 2013, a patent is barred if a claimed invention was patented; the subject of a printed publication; in public use; on sale; or otherwise available to the public before the effective filing date of an inventor's patent application.

A disclosure by the inventor that occurs less than one year before the effective filing date of the inventor's application will not be a bar to patentability. Also, a disclosure by a third party that occurs within one year before the effective filing date of the inventor's application will not bar patentability so long as the inventor disclosed before the third party.

Useful – To be patentable, an invention must have some utility; that is, the invention must be useful for some purpose. An invention that is inoperative is not a useful invention. Utility is not presumed, but must be disclosed as a part of the patent application.

Nonobvious – Despite the fact that one particular prior art reference does not anticipate an invention exactly, an invention may be obvious, and thus barred from patenting. An invention is obvious if a person of ordinary skill in the art would find it obvious to modify the prior art in such a way. Additionally, obviousness may be determined by combining what is disclosed by multiple pieces of prior art. Under the new patent legislation, effective March 2013, an inquiry regarding obviousness is made on the date of the filing of the patent application, rather than the date of invention.

Who May Obtain a Patent

In the United States, only human beings can be inventors. The ownership of every invention and patent application begins with the inventor(s); however, the inventor(s) may be obligated by the terms of an employment or other agreement to assign the invention. If two or more persons make an invention jointly, then they must apply for a patent as joint inventors.

For patenting purposes, an inventor is anyone who contributes to the conception of the invention—that is, whoever helps form the idea of the invention to the point where it would work when reduced to practice. "Actual reduction to practice" means to have obtained a working model of the invention. Someone who did not contribute to the conception but helped reduce it to practice cannot be cited in the patent as an inventor. For example, someone that just conducted experiments in order to obtain a working model and did not offer any ideas that contributed to the invention cannot be cited as an inventor. "Constructive reduction to practice" means that a patent application has been filed. If the inventor is dead, insane or otherwise legally incapacitated, refuses to execute an application, or cannot be found, an application may be made by someone else, such as a legal representative or guardian.

When a Patent May Be Obtained

A patent can be obtained when the inventor has conceived of an idea in enough detail to be reduced to practice. However, the application must be filed within one year of the inventor's public disclosure or else the invention is barred by the novelty requirement. Due to the changes in patent law, inventors are strongly urged to file patent applications **before** making any disclosure in order to avoid having to keep track of the one-year grace period. Fortunately, in order to quickly get a filing date without providing a full patent application, a provisional application may be filed. A provisional application does not require claims, which are time-consuming to draft. Further, a provisional application allows the inventor to establish a filing date. A provisional application is essentially a placeholder. A non-provisional (regular) application, including claims, must be filed no more than a year after filing a provisional application.

Ownership and Sale of Patent Rights

Both patents and patent applications may be bought, sold or transferred in whole or in part like any other piece of property. The inventor may sell all or part of his interest in the patent application or patent to anyone by a properly worded assignment.

An **assignment** is a legal document or contract, preferably drafted with the assistance of an attorney, which states to whom the property is being transferred. Assignments and other transfers of interest in patents and patent applications can be recorded in the USPTO. Recordation in the USPTO is not required, but it works much like real estate recording statutes to protect a buyer against subsequent transfers of patent rights. The recording of an assignment is not a determination by the USPTO that the assignment is valid or effective. If a patent is assigned, the assignee becomes the owner of the patent and has the same rights as the original patentee.

Chapter 2

DETERMINING WHETHER TO PATENT

Performing a Patent Search

The first step you might want to take to determine if you should pursue a patent is to perform a preliminary **patent search** (also known as a prior art search). This serves as an initial way to look at what has already been patented.

A patent search should be performed before pursuing a patent for several reasons. First, you need to make sure that others do not have exclusive rights to, or have previously disclosed, the invention you are currently developing. If you did not find your product already on the market, do not assume that it is not already patented. If you do develop and market a product that someone else already holds a patent on, you will most likely be sued for patent infringement. Second, you cannot patent an invention that has already been patented, even if the prior patent has expired. A patent search can help you avoid wasting money on a patent application that may not be granted. Third, a patent search may also provide helpful insight on the state of the art in a particular subject matter area.

You can save time and money by performing an initial patent search yourself. There are several library and on-line resources that can assist your search:

United States Patent and Trademark Office (USPTO)

www.uspto.gov

The Scientific and Technical Information Center located at Madison West Building, 600 Dulany St, Alexandria, VA, has over 120,000 volumes of scientific and technical books, about 90,000 bound volumes of periodicals devoted to science and technology, the official journals of 77 foreign patent organizations, and over 40 million foreign patents on paper, microfilm, microfiche, and CD-ROM, all available for public use. It is open to the public 8:30 a.m. to 5:00 p.m., Monday through Friday, except federal holidays. The Patent Search Room (same location) is provided where the public may search and examine United States patents granted since 1790. Patents are arranged according to the U.S. Patent Classification System of over 400 classes and over 136,000 subclasses. The Patent Search Room contains a set of United States patents arranged in numerical order and a complete set of the Official Gazette. It is open 8 a.m. to 8 p.m., Monday through Friday, except on Federal holidays.

Additionally, the USPTO website hosts a database in which patent searches may be conducted. In addition to providing information on patents, trademarks, related rules, and the application process (including application forms you can download), this site has links to USPTO's free patent databases: the U.S. Patent Bibliographic Database, a database of front-page information from U.S. patents issued from January 1, 1976 to the most recent issue date, and the AIDS Patent Database, a database of the full text and images of AIDS-related patents issued by the US, Japanese, and European patent offices.

D.H. Hill Library, North Carolina State University

The DH Hill Library on the North Carolina State University campus contains one of the only patent depository in North Carolina. The reference librarians are very helpful and will assist you in conducting your own patent search using a CD-ROM database and the Automated Patent Search System. This is a free service; the only cost you may have to bear is that of copies. Review their website for pertinent information. *Website:* lib.ncsu.edu/about/dhhill

Atkins Library, University of North Carolina – Charlotte

As a Patent and Trademark Depository Library (PTDL), Atkins Library provides public access to copies of U.S. patents and patent and trademark materials for search purposes. Librarians are not permitted to offer advice or opinions on the quality or completeness of a patron's search, nor are they able to suggest keywords, classifications, or other information for their specific inventions, as this could be considered unauthorized practice of law. If a patron is looking for assistance with their specific invention rather than simply with the use of the search tools, they should contact a [registered patent attorney or agent](#). Review the library's website for pertinent information.

Website: <http://guides.library.uncc.edu/patents>

MicroPatent

MicroPatent's PatentWeb and TrademarkWeb sites (linked to this site) enable you to view newly published patent applications, research patentability, or conduct a patent or trademark search.

Website: www.micropat.com/static/

NCLive

This is a recently implemented state program through which North Carolina public libraries, community college libraries, UNC system libraries, and libraries serving the thirty-six members of the NC Association of Independent Colleges and Universities offer patrons access to a core group of reference and research materials on-line. This means you are most likely near a library through which you can have free access to a number of electronic resources useful for a patent search. Library staff can assist you in using the NC Live resources. *Website:* www.nclive.org

Google Patents

Google provides the ability to search through the USPTO database using the Google graphical user interface. Patents can be searched using keywords, Boolean operators, or registration/publication numbers. Some searchers prefer doing a preliminary search using Google because the interface is familiar and somewhat easier to navigate compared to the USPTO database. Issued patents and published applications can be downloaded as PDF files.

In the process, you should list any patents that seem similar to your invention and read them thoroughly. If the invention is disclosed in an expired patent or any prior publication, anyone can produce it without regard for patent laws and no one has exclusive rights to it; the invention cannot be patented again. If a current patent claims *any* part of the invention, the patent owner has exclusive rights in the claimed portion until the patent expires. A person—a **patent agent** or attorney—must artfully draft claims in a patent application to prevent claims made in prior art references from prohibiting the claims submitted in the application.

These preliminary patent searches will help you evaluate the uniqueness and feasibility of your invention, but they may not be entirely complete. Developing prototypes and filing patent applications can be expensive and very disappointing if a patent or some other bar to obtaining a patent that was missed is found later. Therefore, if your preliminary patent search appears promising, you should also have a professional patent search performed. A registered patent agent/attorney, or a specialized patent search company can perform a professional search for you. A patent agent or attorney is a technically trained person who has passed a U.S. Patent and Trademark Bar Examination to practice before the U.S. Patent and Trademark Office. Patent agents are limited to prosecuting patent applications, i.e., obtaining patents. A **patent attorney** has also passed the U.S. Patent and Trademark Bar Examination, but is also permitted to perform legal services assuming they are properly licensed with the appropriate jurisdiction. Patent attorneys and agents are more familiar with researching the wide range of product categories and fields of research. They also understand better how to evaluate claims or lack of claims with similar patents. A patent agent/attorney's letter detailing positive search results may be valuable in raising capital and encouraging other parties to help in product development. The patent agent/attorney will likely make a recommendation on whether you should pursue a patent and undergo the expected costs. Many invention marketing firms also include patent searches in their list of services (Discussed in Chapter 8). Website: www.google.com/patents

Will Your Invention Sell?

While many inventors invent just for the fun of it, more often than not, an inventor is looking to profit from his or her invention. Thomas Edison once said, "Anything that won't sell, I don't want to invent." Too often, however, inventors assume that patenting the invention will guarantee profitability and success. Unfortunately, this assumption could not be further from the truth.

No matter what problem the invention solves, you should first determine if it is a problem that concerns other people. It is also important to ascertain whether people are willing to consider buying a new product to solve the problem. Obtaining a patent can be a long and expensive process and the time and money required can be easily wasted if the product is not commercially successful afterwards. Therefore, before rushing out and spending thousands of dollars to obtain a patent, you would be wise to first conduct some research to determine if the invention is a potentially marketable product. While those close to you may believe the invention is a surefire success, marketing research that goes beyond friends and relatives should be performed to obtain opinions that are more objective.

Evaluate Marketability

Evaluating the marketability of your product is very important in deciding if you should patent because it will help you to discern the potential profitability of your product, as well as discover potential competition. Although you may think there is no other product like yours, there may be products and/or services on the market that solve the same problem as your invention. Unless you have a truly new product to meet a totally new need, competition is likely. These competitors should be identified to help evaluate the potential success of your product. This is a step that many eager inventors regrettably exclude.

Some basic considerations to make about potential profitability are:

- What are consumers looking for?
- Does the product meet their needs?
- Is the price reasonable considering what needs it meets?
- Does it meet the needs of a select few, or a large number of people?
- Is it a fad item?

- Will demand be seasonal?
 - Is the market for the product a growing or mature market?
 - How large is the industry and market for the product?
 - Are confidentiality agreements made with those to whom the invention has been revealed? (See next section)
- To help further evaluate marketability and all current competitive products:**
- Talk to experts in the field of the invention who know the product type and market and ask their opinion on its need.
 - Make a list of different categories the product might be related to.
 - Search through different company and product catalogs.
 - Browse websites of companies and products related to your idea.
 - Go through stores and search for your product concept.
 - Study any product you feel is closely related.
 - Attend trade shows, but be careful not to disclose too much information about the invention; collect literature and business cards.

Some sources to use in performing your marketing research include:

- mail order catalogs
- trade associations and professional societies
- corporate buyers
- annual reports and product brochures from other manufacturers
- consumer interviews & opinions
- industry and government experts
- purchasing agents
- telephone surveys, mail surveys

Other helpful sources generally available at your local library include:

- industry directories
- statistics
- government census data
- *Thomas Register of Manufacturers*
- *Readers Guide to Periodicals*
- business articles
- technical literature
- InfoTrac (article database)
- *F&S Directory*

The electronic resources provided in the N.C. Live Program are also helpful for market research, particularly Business Source Elite, Hoover's Company Profiles & Capsules, and various periodicals databases. For more on NC Live, see *Perform a Patent Search*, p. 10.

If you need assistance in performing your market research, there are several books that discuss marketing research and are available at your local library and most bookstores. See the Appendices of this booklet for useful books, journals, references, and websites.

Confidentiality Agreements

While it is important to keep all information about your idea confidential until a patent is obtained, you should avoid being too secretive or overprotective. Fortunately, after the invention has been made public, you are granted one year in which to file an application, otherwise you are barred from obtaining a patent. To successfully develop an invention, it is often necessary to reveal the invention to others, including potential customers, manufacturers, and salespeople. To protect yourself, you should use **confidentiality agreements** (also called proprietary information agreements, secrecy agreements, and non-disclosure agreements). These agreements will state that the person(s) you give information to have to hold that information in the strictest confidence and agree to not use the idea for their own gain. You should consult with a licensed attorney to develop an agreement suitable for your specific situation for contractual purposes.

Protecting the Invention by Filing as soon as Possible

You may be apprehensive about performing market research in lieu of applying for a patent for fear of someone else "getting a jump" on the idea, and this is a valid concern. Due to the changes to the U.S.

patent application filing system, it is recommended that an inventor take the necessary steps to file a patent application as soon as possible. This may mean filing an application before doing market research, or at least concurrently. Effective March 2013, the USPTO will use a first-to-file system that provides priority to the first person to submit an application so it is in the inventor's best interest to file quickly instead of waiting.

Maintaining a dated invention notebook may be helpful as a good practice for inventors to keep track of ideas and experimentation, but it will not provide protection of your invention if another person files a patent application before you. This is true *even if your invention notebook has dates that are prior to another person's patent application.*

The primary benefit of keeping a detailed invention notebook is that it will assist in drafting the patent application, particularly the specification, claims, and drawings.

A detailed invention notebook should adhere to the following guidelines:

- Write a detailed description of the idea or invention and all advantages in a bound notebook with numbered pages.
- Make an entry whenever there's a change in the invention or there is evidence of progress.
- Write with permanent ink and cross out mistakes by marking through errors with a line. Never erase or "white-out" mistakes.
- Include test results, sketches, and drawings, and sign and date the bottom of each page.
- Have at least two witnesses sign and date each page. These should be people who understand the idea or invention.
- Don't erase anything or leave any large blank spaces within text.
- Fill in blank areas with a couple of diagonal lines so you can't be accused of making entries after the page was signed.
- If you leave a blank page, write on it "blank page".
- Make at least one entry per month to avoid looking like the project was abandoned.
- Research data related to pending or issued patents should not be destroyed.
- If notes are kept on a computer, make entries at the end of each day. Each daily entry should then be printed out, signed, and witnessed. The final printed, signed, and witnessed document should be pasted in a notebook.
- Notarization is not a legal requirement
- Remember, it's never too late. You can start anytime by entering a history of what's been done to date.

Chapter 3

PURSUING A PATENT

Retaining a Patent Agent / Attorney

Regardless of whom you hire to perform the professional patent search, a patent attorney or agent should be retained if you intend to have a patent application filed. While the process is not impossible for the average inventor, it is long, complicated, and very difficult. Typically, the best protection will be obtained if an attorney/agent is used. Some patent attorneys/agents specialize in certain areas of inventions and you should try to find one with in-depth knowledge in your area. If you can't, remember that the more you do to help, the less the attorney has to charge. For example, if you search as much literature as possible, including patents, initial attorney consultations will accomplish more, and further searches will cost less.

For help in finding a patent attorney/agent, refer to the list of North Carolina patent attorneys and agents on the USPTO's website at oedci.uspto.gov/OEDCI/. To avoid surprises, know what the hourly and fixed rates are up front. In selecting an agent/attorney, make sure you are willing to continue a long-term working relationship with the person. This will be someone to include in your product development strategy and patent attorneys usually make good licensing attorneys too.

Drawings

There are three types of drawings that will be helpful in your new product development process and your pursuit of a patent.

Artist's concept drawing

This drawing is a black and white line drawing that should be done by a good artist early in your product development process. While it's not an engineering or blue print drawing, it will give you and those you initially work with a better perspective of what you are trying to accomplish.

Engineering drawing

If you want a manufacturing company to produce your product, you should look into having someone with knowledge of computer rendering software such as AutoCAD produce engineering drawings for you after the prototype is complete and tested. Manufacturers often look for these 3-D and cross-sectional drawings in order to help determine accurate manufacturing requirements.

Patent drawing

These are necessary for utility and design patent applications. The UPTO has complex and specific guidelines for patent application drawings, so these drawings should be completed by a patent draftsman. Although you can find a draftsman on your own, your patent attorney/agent should be able to refer you to one he/she regularly uses.

See the Appendix, section *Finding necessary goods and services*, for tips on how to locate someone to draw your product.

Reduce the Idea to Practice: Prototypes

After an idea is conceived, it should be reduced to practice. It's one matter to come up with an idea and write it down in an inventor's workbook. It's an entirely different matter to actually demonstrate that the invention works. **Creating a *prototype* for submission of a patent application is generally not recommended.** If a patent is issued, The USPTO requires prototypes to be preserved by the applicant for the duration of the patent term or else the patent can be invalidated. This is an unnecessary burden on the patentee. Development of prototypes is recommended as a step in preparing for marketing an invention to a company for licensing/selling purposes. Developing a prototype requires ingenuity, trial, and error. The process can usually be divided into two stages.

Rough prototype

This prototype needs to only demonstrate the working principles of the invention and is useful for ironing out the technical or design details. Given its purpose, it may be sufficient for you to prepare the invention using glue, cardboard, tape, etc. Other resources may be found in the Yellow Pages, the *Thomas Register of American Manufacturers* (www.thomasnet.com), trade and industrial journals, and arts and crafts magazines. Retail stores and craft centers can also be helpful. This stage saves you from spending money on a final design that doesn't work.

Working model prototype

This prototype should be of higher quality than the first prototype and be suitable to show potential customers. Remember to use confidentiality agreements and include the words "Confidential Prototype" on the prototype if you do show it to others. The materials you use should be as close to the final materials needed as possible. As such, this prototype will cost much more than the first one. You may even need to contract with a custom designer or machine shop.

There are two ways to have these two prototypes developed. On one hand, you can let an industrial design house take the entire project. Their services would include doing the industrial design, drawings, prototype developing, developing the production prototype (working model) and product testing. Alternatively, you could do some of the work yourself and use professionals as it is needed. This process would consist of five stages:

5 Stages of Prototyping	
Design Stage	Concentrating mainly on function and performance, make illustrations of the product including its dimensions and placement of components.
Procurement Stage	Collect materials for the rough prototype.
Assembly Stage	Construct the rough prototype.
Industrial Design Stage	Use an artist to fine-tune the industrial design of the product. Artist should have experience in this area.
Advanced Engineering Stage	Have a prototype developed that looks <u>exactly</u> like the industrial design drawing.

In the last stage, you may need to locate a small prototype shop that specializes in the materials the product will need. For example, if the product will be plastic, locate a plastic tooling company. If the product is made of metal, look for a machine shop. Keep in mind that such a facility, which specializes in customized products and may have engineers with prototype experience, will be most willing to

devote time to developing a good working prototype. Some universities or engineering schools also provide prototyping services at a low cost. Check with a local university or engineering school for availability of these services.

Product Testing

Part of developing a prototype involves testing the product. Many mass merchandisers will not purchase your product if you do not have it tested by a consumer testing laboratory first. The testing should include safety as well as operational tests.

The following organization will direct you to the nearest private laboratory to perform tests:

ACIL (American Council of Independent Laboratories)
1875 I St, NW, Washington, DC 20006
Telephone: (202) 887-5872
E-mail: info@acil.org
Website: www.acil.org

Often laboratories at universities also offer testing services. Contact the Technology Transfer office or appropriate department of a local university to find out whether the university's labs provide testing services.

For instructions on how to locate other necessary testing services, see *Finding Necessary Goods and Services* in the Appendices.

Filing the Patent Application

The USPTO's website includes a guide to filing a utility patent application, as well as various other resources, at www.uspto.gov. By law, the USPTO has changed the patent application process from a first-to-invent system to a first-to-file system. This means that inventors are encouraged to file their applications as early as possible in order to have the best chances of receiving an issued patent. An inventor that files an application later in time will be blocked from filing and will not be able to contest an earlier-filed application if the subject matter of the earlier application reads on the invention applied for in the later-filed application. The transition to a first-to-file system took full effect in March 2013.

The initial requirements for the utility patent application include:

- A written document with an enabling specification (a detailed description of the invention with at least one claim).
- Drawings, if necessary.

As mentioned earlier, the process of filing a patent application can be very challenging, and there are additional requirements that are necessary subsequent to the ones named above, *i.e.*, fees, inventor's oath/declaration, an information disclosure statement, etc. You will receive the best results through using a patent agent or attorney.

Process at the Patent and Trademark Office

For purposes of this discussion, let us assume you employ a patent attorney to file your application. Once the application is received at the USPTO, your attorney will receive a filing receipt with the filing date and serial number for the application within six months of filing. Upon request, or automatically after 6 months have passed, you will be issued a **Foreign Filing License**, which entitles you to file foreign patent applications based on the U.S. application. In rare instances, for national security reasons, a Foreign Filing License may be withheld.

The application is then checked for any deficiencies. If any of the application requirements are missing, the application will be cited as incomplete and you will be sent a Notice of Omitted Items. You will be given a specified period of time to furnish the missing materials. If the application is complete and meets filing requirements, it goes through a classification procedure. Then the application is forwarded to the proper department for examination.

The USPTO receives hundreds of thousands of patent applications each year. Depending on the number of applications an examiner is reviewing, it may be several months before yours is formally reviewed. The examiner will start the process by performing an in-depth patent search and also search related publications to verify your claims. This also includes searching foreign patents. If a claim is accepted, it means that the claim is patentable and should be incorporated into a patent. During the examining process, the examiner will determine whether or not your disclosure of the invention enables the reader to make a functioning model of your invention – based on the description alone. This is a very important requirement in having a patent application granted.

Most applications go through various office actions that are sent via letters or emails from the USPTO. If an examiner rejects one of the claims, a letter or email will be sent to your agent/attorney. A proper response will need to be filed within a period of time, or the application will be considered abandoned. After receiving the response, the application will be reviewed again, and another office action will be sent to your attorney. Usually the second or third office action is marked as the final decision—either approving the application or issuing a final rejection.

If during the process, you decide that the invention's value is comparatively too low, or the claims allowed will not be enough to protect you in potential markets, an application can be abandoned. This would avoid further prosecution and associated fees. However, you are not necessarily entitled to a refund of any fees paid up to this point. If you develop a patentable improvement to the invention before the examination proceeding ends, you can file a **continuation-in-part** to add the part of the invention not previously disclosed; however, the new part of the invention will only receive the filing date of the continuation-in-part and not of the first filing. If your original application did not clearly distinguish claims from prior inventions, you can also file a **continuing application** to change the claims before the examination ends. However, the changes to the claims must have been disclosed in the original specification, or else a continuation-in-part must be filed to add the new matter. These afterthoughts can be expensive and further emphasize why it is beneficial to hire an expert to file your application.

After the first office action, an interview with the examiner may be requested. If he/she agrees, you can interview with the examiner, with your agent/attorney, to plead your case. This would be your chance to demonstrate your prototype, discuss claims, and suggest how the claims could be reworded. Therefore, it is possible that once rejected claims could be allowed after revisions.

Fees change with each fiscal year; for up-to-date USPTO fees, please refer to the USPTO website. The cost of pursuing and maintaining a patent can cost thousands of dollars. These potential costs are very important to consider when deciding to apply for a patent. You should evaluate carefully whether the potential profitability of your product exceeds this amount of money.

The process of obtaining a patent requires an average of 3-4 years, but can take longer. It is best to prepare an estimated timeline for your patent application to help you plan.

Funding a Patent

Contrary to popular belief, there is no free money available to help with obtaining a patent. One way to raise money would be to have a self-financing patent. This would involve marketing and selling the product for less than one year and using the profits to fund the patent. Often, licensing agreements provide that the licensee reimburse and pay for patent costs. However, publicly disclosing the invention before filing an application prohibits you from being able to file for any foreign patents. Probably the best source of initial outside funds would be from friends or relatives. Remember to employ confidentiality agreements if you choose this option.

Enforcing Patent Rights

The U.S. Patent and Trademark Office does not monitor commercial transactions for possible infringement activities or enforce patent rights against potential infringers. It is the responsibility of the patent owner to discover infringing activity. As a patent owner, you may seek both an injunction against an infringer, as well as the recovery of monetary damages. The cost of a lawsuit depends on the complexity of the case, but legal expenses alone can easily reach into the tens of thousands of dollars; however, many patent infringement cases are settled fairly quickly. An alternative to suing would be to offer the infringer a license to make the patented invention. This license could include an initial base payment, as well as **royalty** payments for each unit the licensee makes, uses, or sells. Licenses are discussed more in depth in Chapter 4.

The USPTO does not guarantee the validity of a granted patent. A patent may be found by a court to be invalid, and therefore unenforceable, at any point during its lifetime.

What to do After Getting a Patent

After receiving a patent, you will face many choices and problems. How should you manufacture, market, distribute, and sell the product? Should you start a business that makes and sells the product? Should you sell your patent to a manufacturer through an assignment? Should you license it to another company for a royalty and let that company sell the product? These are just a few of many decisions that you will have to make and implement after thorough research and evaluation. The next two chapters discuss the advantages and disadvantages of licensing and manufacturing and will help you determine which option is best for you.

Chapter 4

MANUFACTURING AGREEMENTS: PATENT ASSIGNMENTS & LICENSING

Generally, an inventor's goal is to profit from his invention. For many inventors, forming an agreement with a manufacturer and/or distributor is the best way to make money on an invention when the costs of developing, manufacturing and marketing the invention are beyond their means. There are two types of agreements that may be used to transfer intellectual property rights: a **patent assignment**, *i.e.*, one-time buyout, or a license.

What is a Patent Assignment?

As mentioned earlier, patent law provides for the transfer or sale of a patent through the use of a properly worded assignment. If this occurs between an inventor and a manufacturer, it is often in the form of a one-time buyout in which the inventor sells ownership of the patent for one flat fee. Upon acceptance of the fee, all claims of ownership to the patent are relinquished to the company. The company then has full control of the patent. Many manufacturers use this to get the inventor out of the picture quickly and cheaply. This is also a quick and easy option for the inventor, but it may result in the inventor receiving something less than an ideal profit. Thus, this option is rarely recommended.

What is a License?

A **license** is a legal contract that gives another party permission to make, use, or sell your invention. It is possible to sell a license to your invention to others both before and after a patent is issued. A license is best written by an attorney with experience in this field. Patent attorneys and many other corporate attorneys, especially those that are experts in intellectual property are best suited to draft these agreements. A license contract designates a royalty for the inventor that is usually as a percentage of the sales of the invention.

Pros and Cons of Licensing

Licensing your product to a company is usually the least risky method of profiting from your invention, since starting a new business has its own unique set of risks. Unfortunately, licensing also gives most of the control and profits to the company because they bear most of the financial risk if the idea fails. However, licensing, and the resulting royalties, may be the best approach for you, particularly if you don't have the resources to develop your idea. Keep in mind that a license may be limited in certain ways. For example, a field-of-use license can be limited to certain industries, uses, or geographical areas. The advantage of such a license is that you have greater control in negotiation and may still have rights in areas not licensed.

By licensing your invention, you also eliminate the distractions associated with manufacturing such as developing a profitable distribution network, finding good employees, finding adequate capital, and dealing with payables or receivables. Without these distractions, you can focus on developing other ideas you may have. An added advantage of this option is that you retain much, if not all, of the ownership in the patent.

Selecting the Right Licensee

You should start the process of finding a licensee by preparing a list of as many prospective companies as you can. Use local library and on-line resources to aid your search. One PI to begin looking for

companies would be in the *Thomas Register of American Manufacturers*, available in book form at your local public library or online at www.thomasnet.com. The register details manufacturers for a variety of industries. By looking at the industry particular to your product, you can locate several manufacturers who may be interested in adding your product to their manufacturing line. Other sources of company information include:

Hoover's Standard
(similar to Thomas Register, see www.hoovers.com)
 Encyclopedia of American Industries
 NC Manufacturers Register
 NC Business Directory
 Securities and Exchange Commission

If the company is a public business, *i.e.*, if it sells stock to the public, you can call them and request an annual report.

In preparing your list of potential licensees, consider each company's product line, distribution breadth, management, marketing style, existing legal issues, product seasonality, company size, annual sales, etc. Companies with nationwide distribution are best. Keep in mind that large companies may be more interested in a deal because they have more manufacturing, marketing, and advertising capabilities than smaller companies.

Contacting Companies

It can be difficult to find companies willing to license an invention, especially when it involves an unproven concept for a new product. Many companies do not accept ideas provided by outsiders or individuals. These companies often have their own research laboratories working on inventions and not interested in the work of others—since the company didn't invent it, the company does not want to use it. The company may also be working on the same invention and would want to prevent possible legal problems by avoiding any outsider.

Given these obstacles, here are some tips to use when first contacting a company:

- Whether you begin contact by written correspondence or phone is up to you, but contacting the company by phone will give you more of a chance to explain who you are and your expertise. You may have a better chance of getting your foot in the door.
- If you choose to phone the company, it's best to call between 7 a.m. and 9 a.m. in the middle of the week, Tuesday through Thursday. Mondays and Fridays are generally when your contact would be too busy to talk to you in depth.
- Do not just describe yourself as an inventor. Play upon any expertise or experience in the field you possess, *e.g.*, an engineering degree, Master's, Ph.D, etc. This will help establish some credibility.

Keep in mind that most companies do not want to be sent a sample or prototype initially. They want to see a product proposal.

Initial Presentation

If possible, it is best to meet with anyone who is in charge of new product development (President/CEO, Vice President of Marketing, etc). These are the people with the decision-making capabilities in the company.

The more you develop your idea, the greater the opportunities to license the invention. Usually, a company is only interested after an invention is patented and successfully demonstrated with prototypes and working

models. Other companies may license ideas after a patent application is filed. You have to convince the company that it will make a higher profit by selling your product than if it sold its existing products. Presenting a well-developed market analysis and a manufacturing cost estimate to a potential licensee will help you convince a company to license your invention. You should also try to have a confidentiality agreement signed by the company if you are disclosing the details of your invention, but do not be surprised if your request is met with resistance.

Negotiating the License Agreement

“What kind of deal are you looking for?” If your prospective licensee shows interest in adding your invention to their product line, you will most likely be asked this question. It’s important that you know the answer well in advance. There are several terms within a license agreement that you should consider beforehand (next page):

Term	Explanation
Duration	How long the agreement will last.
Royalty percentage and payments	In many agreements, royalty payments are usually paid every 90 days and the percentage could range from 3% to 8% of the manufacturer’s gross sales figure. The more developed your idea is, the higher percentage you’ll be able to demand.
Patent litigation responsibilities	Prosecuting a patent infringer or even defending your patent rights can be very expensive. You should try to negotiate a deal where the manufacturer agrees to bear these potential costs. However, in most agreements, the inventor is responsible for these costs.
Sublicense rights	The manufacturer may want to sublicense the invention to someone else.
Exclusivity	You may want to license your product to more than one manufacturer.
Cash advance	Getting a cash advance upfront would allow you to recoup the expenses you incurred during your product’s development (patent, prototype, etc.). The advance may be separate from the royalties or be an advance of the royalties. Cash advances often range from \$15,000-\$30,000+.
Rights to commercialize certain applications	If your product has several applications, you may want to reserve the right to manufacture and/or commercialize some of those applications, while the manufacturer handles others.
Guaranteed performance	With a “Minimum Royalty Requirement Clause,” you can guarantee that the manufacturer goes into production of your product without delay.
Performance milestones	This is very important to have in your agreement, because you will want to assess the manufacturer’s performance periodically. If you are unsatisfied at any pre-determined time, you can retake control and try to secure a new company to produce your product. These milestones also give you a chance to re-negotiate and increase the royalty agreement.
Exits/Termination	An “escape” clause would give you and/or the manufacturer a way out if there is any subsequent dissatisfaction under of the agreement.

Remember to keep your attorney involved as an advisor, know what you want, and be content with a good deal.

What to Expect After Signing

Even if your manufacturer begins production of your product immediately, it may take six months to a year before the manufacturing start-up is completed and distribution begins. Therefore, you may have to wait a little before receiving your first royalty check. You should also know that unless your product is *extremely* successful, you should not expect to support yourself on the royalties alone.

Chapter 5

STARTING YOUR OWN BUSINESS

To avoid turning over control of their inventions, many inventors think about starting their own business to manufacture and distribute their product. You should understand the full implications of this approach. Taking an idea and actually putting it on the shelf yourself is not an easy task. Although it is not impossible, there are many steps in the process.

The biggest advantage of manufacturing your product yourself is the ability to retain control of your product. An added bonus is that you also get to enjoy the majority of the profits earned. The downside of this option is that there are many serious issues you will have to deal with in order to successfully start a new business.

Startup Capital

How will you raise funds for buying or leasing a building, equipment, etc.? Access to capital is a critical first step.

Internal financing mostly consists of personal assets, which should be the first source considered. Personal asset sources include: checking and savings accounts; retirement funds; credit cards; stocks/bonds and other such investments; and home equity loans. If you do not have sufficient personal resources to get through the lean times at the start-up of the business, you may want to reconsider whether the time is right for you to start a business, or look for external sources of capital.

Further, you may consider external sources such as debt financing, friends or family, angel or equity financing, or grants. Debt financing involves borrowing money from an individual or institution for a fee. One advantage of debt financing is that there is no dilution of ownership. Whether a short-term loan, or a long-term loan, all debt must be repaid at some point or the collateral will be seized by the lender to repay the loan. The interest rate raises the company's expenses. Equity financing involves selling partial ownership of the company. Grant money or "free money" is an uncommon financing tool. Companies rarely qualify for grants. There are limited grant funds provided by federal government agencies through the Small Business Innovative Research (SBIR) and Small Business Technology Transfer (STTR) programs for research and development, as well as for technology commercialization projects meeting specific government solicitations (see the SBTDC's website, www.sbtdc.org, for more information). For a more complete listing of financing resources, see the SBTDC publication *Capital Opportunities for Small Businesses*.

Marketing Issues

How will you effectively and efficiently make potential customers aware of your product? Marketing focuses primarily on determining the needs of consumers, informing them about your products, and using strategies to convince them to buy your products. Marketing also involves making decisions about your product's packaging, pricing, selling, distribution, and advertising. These marketing issues are closely linked and can dramatically affect the success of your invention and your business. If you need assistance in making decisions regarding marketing issues, the general business counselors at your local SBTDC office are available to help.

The Internet

You may consider making use of the Internet to market your invention. Internet websites require a unique domain name. Domain names, such as <http://www.sbtcd.org>, are unique identifiers, which may be registered as a trademark. Domain names are available on a first-come, first-served basis and must be registered through an ICANN-accredited registrar. See www.icann.org/en/resources/registrars for more information about domain name registration.

Registration and Licensing

Should you decide to develop a business around your invention, you will need to register the business with state and local authorities (as well as learn relevant tax, insurance, and legal information). License and regulatory requirements vary from business to business, but there are a few basic resources you can use to start gathering such information.

- The *State of North Carolina Website* has helpful information regarding licensing at www.secretary.state.nc.us/Corporations/ThePage.aspx
- Business Link North Carolina (800/228-8443) can provide you with information about business forms, licenses, permits, and capital access. Visit the website at www.blnc.gov

Other Considerations

- **Manufacturing:** Proving that the product will sell and make a profit is the most important question in deciding to startup a business. The next chapter contains an exercise you should complete to help you evaluate the potential profitability of your product.
- **Materials:** What materials will you need? Where will you buy them and how much will it cost?
- **Labor:** Where will you find good employees? What will they be paid? How will you meet payroll?
- **Insurance:** What health and accident insurance will be offered to employees?
- **Accounting:** Who will manage your bookkeeping?
- **Taxes:** What are the tax implications?
- **Inventory:** How much inventory will you keep on hand?

Chapter 6

MARKETING & FINANCIAL RESEARCH

Marketing Research

To help you decide whether to manufacture your product and distribute it yourself or license your invention to a manufacturing company, you will need to perform some in-depth market research to determine whether the public really wants your invention. If you have already obtained a patent for your invention, you may have performed some preliminary market research to determine whether pursuing a patent would be worth the effort. At this point, especially if you have a patent pending or granted, you should take your market research a step further to estimate how many customers will buy your product. In addition to using the various sources listed in Chapter 2, there are several other ways to help you estimate your potential sales.

Test Marketing Program

With this strategy, you would actually offer your product for sale to a small portion of the market. Unfortunately, you may be prohibited from choosing this method if tooling, production, and distribution costs are currently beyond your means.

Trade Shows

Another good way to gauge consumer interest in your product is to attend trade shows. You may find that this Ave is less expensive than running a test marketing program, but it also gives you an opportunity to get a lot of public reaction to your invention in a short amount of time. There are thousands of national and regional trade shows, so it is possible you can find the right one to showcase your product. The Encyclopedia of Associations, available at any library will provide information on which trade shows are best for you. For your protection, given the number of people that attend both regional and national trade shows, it is best if your product has at least a patent pending before exhibiting it.

Focus Groups: Interviews

As the name implies, this strategy involves soliciting views from potential customers. This can be done in a shopping mall, on the street, or going door-to-door, depending on your budget. You and/or any recruits you hire can pose simple “yes” or “no” questions to potential customers and use their responses to determine the percentage of people who would possibly buy your product. With this approach, the larger the number of people you interview, the better. Alternatively, a more directed approach would be to hire a focus group to test your product.

To complete your marketing research, you may consider following the next three steps using any or all of the above methods and record the results.

The following steps are provided as an example and are solely for informational purposes.

- 1. Estimate the total number of potential customers.** For example, if your idea is for a bicycle accessory, try to find out the number of bicycles sold per year. Call some bicycle manufacturers and ask how many they sell. If there is an association of bicycle riders, call them for information too. You can also research the sales of certain categories of bicycle accessories. As always, your local library and the Internet are excellent resources.
- 2. Estimate the percent of potential customers who would buy your product.** Continuing the above example, ask 20 bicycle owners if they would buy your invention at your proposed selling price. If only 1 in 20 says “yes”, that would mean about 5% of the total bicycle purchasers would buy your invention. However, if we assume that only 1 in 5 of that 5% would even see your product in a store, the odds become that only 1 out of 100 (or 1%) will buy your product.
- 3. Calculate the number of units you estimate you could sell per year.** Multiply the total potential customers by the percent you estimate will buy your product. For the above example, if you found that 500,000 bicycles are sold per year, then you would multiply 500,000 by 1% to estimate sales of 5000 bicycle accessories.

Financials

The following steps are provided as an example and are solely for informational purposes.

You may perform the following five steps to determine the potential profitability of your product under “realistic” conditions:

- 1. Estimate how much in sales revenue will be made with the invention.** Use your estimated unit sales from the marketing assignment and multiply it by your estimated sale price (use the correct sale price depending on the customer—use the wholesale price if you sell to a distributor, or the retail price if you sell directly to consumers). This amount is your estimated annual revenue.
- 2. Estimate annual expenses of both the invention and the business.** Add all your per unit expenses for manufacturing and selling your product. Make sure your account for the costs of raw materials, labor, and distribution per unit (if you do not have firm numbers, try to estimate these). Multiply these per unit expenses by the estimated units sold to calculate annual direct expenses. Also, calculate the annual indirect expenses your business will incur (including rent, equipment, utilities, legal and accounting fees, etc.). Sum the indirect and direct expenses to calculate total annual expenses for your business.
- 3. Calculate the annual net profit.** Subtract the estimated annual revenue from the estimated expenses to get a rough annual gross profit. Make sure you now subtract what you think the Federal and the State Governments will require in taxes. The result is your annual net profit.
- 4. Determine if profits exceed the patent and production development costs.** Add all your potential expenses for the patent and product designing. This includes all future fees, legal costs, prototyping, construction, tooling, molds, and designer costs. Divide this number by 20 years (the term of a utility patent) to get an average annual cost of the patent and product design. Subtract this from the annual net profit to calculate how much money you really would make per year. If this number is less than zero, the patent costs more than you can make from it!

5. Complete these steps for the realistic, optimistic, and pessimistic conditions. For the optimistic scenario, multiply the unit sales you estimated in the market analysis by 10 and increase your sales price by 20%. For the pessimistic scenario, multiply your estimated unit sales by 1/10 and decrease your sales price by 20%. Make sure you also vary some of your indirect expenses with each scenario as a large business has more expenses than a very small business.

The above steps are appropriate if you are going to manufacture the product yourself. If you are considering licensing instead, you can use a similar type of procedure. There are two licensing viewpoints that can be used to complete the financial analysis:

1. Pretend you are a manufacturer that has purchased a license and do the above analysis while adding in expenses for royalties paid to the inventor. If the manufacturer loses money or makes below the average profit of their existing products, they would be unlikely to proceed with your invention.
2. Calculate what you expect to earn in license fees per year and subtract off all your potential annual expenses for the patent and product development. If you lose money by licensing, you should reconsider using this method of developing your product.

Analyzing the Results

If all three of the scenarios are successful, it is probable that your invention could be a success. However, if any of the three scenarios lose money, the invention could lose money. While this combined marketing and financial analysis is an oversimplification of reality, it is a good initial consideration of what it takes to succeed. A more precise calculation could be performed using a computer spreadsheet and discounted cash flow analysis. It would be a good idea to do this later to make sure you are proceeding on a sound financial basis.

If you have any difficulties in performing or analyzing your marketing or financial research, the general business counselors at your local SBTDC are available to provide assistance.

Chapter 7

TRADEMARKS & COPYRIGHTS

Trademarks

A **trademark** is a word, logo, image, or even a sound or color, used by a party to identify the party's goods and distinguish it from competitors. A **service mark** is essentially a trademark used to distinguish services instead of goods. Otherwise, trademarks and service marks are in all respects identical. Like patents, trademarks and copyrights add great value to the company. You should evaluate protecting your intellectual property (your company branding, logos, marketing, and good will), and help avoid future litigation, through federal registrations.

Trademark Notice

The symbol for a trademark, [™], usually appears on the product, packaging, or by the upper right side of the words or logo, provides notice of a claim to common law rights. Use of the [™] symbol is a way of providing notice that the user may be actively seeking trademark protection through federal registration. The symbol for a service mark, SM, is normally placed on advertising for the service at the upper right side of the words or logo. The symbol ® can only be used if a trademark is federally registered with the U.S. Patent & Trademark Office (USPTO). The ® symbol is evidence of a valid registration and notice to others that the mark has legal protection, on a federal, statutory basis, not just a common law basis.

Trademark Benefits

Having a name that is protected by trademark law is one of the keys to successful product development that many inventors tend to overlook. In fact, the right name and trademark can be just as important to long-term commercial success as obtaining a patent. Use of a trademark over time results in establishing a connection in the public's mind between the trademark and the goods or services offered by the producer. The trademark is a powerful branding tool.

By consistently using a mark in your business, you also gain some legal protection. The law allows the trademark owner to prevent others from using the same or similar mark so that the public will not be deceived about the true producer of the product. If another entity is found to be using a trademark that is confusingly similar to your own, thereby infringing on your trademark, they can be liable for damages and can be enjoined from further use of the confusingly similar mark.

Much like a patent, a trademark and its registration can be transferred to another entity through the use of a properly worded assignment document.

State vs. Federal Trademark Protection

All states have a system of registering trademarks. However, federal registration has numerous advantages over state registration. The acquisition of federal registration allows the registrant to overcome any claims by later users acting in good faith. It affords the registrant the opportunity to use the federal courts without any other basis of federal jurisdiction, and is accompanied by certain statutory rights. When you are certain that the mark will not be used in any other state besides the one where it is registered, state registration may be appropriate. While state common law provides

protection as soon as the mark is used, this protection is generally limited to the area of actual use. Federal trademark protection, the broadest protection, can only be obtained by filing for, and obtaining a federal trademark registration with the USPTO, and by using the “®” symbol adjacent to the mark—it is normally placed in the upper right corner. Federal registration is encouraged because it provides nationwide protection to the owner.

Duration of Trademark Protection

Unlike a patent, a trademark can be used indefinitely as long its use is continuous. A federal registration requires a filing between years 5 and 6 indicating that the mark is currently being used in commerce or a justifiable explanation for nonuse. There are subsequent filings for renewal, but as long as you comply with the filings, your mark will continue to maintain its federal registration rights.

Selecting a Trademark

The selection of a trademark can be very important in terms of your ability to obtain registration and prevent others from using the mark. In selecting your mark, remember that the best trademarks are words or symbols that are “fanciful or arbitrary.” Marks that have no meaning in the English language, *e.g.*, KODAK® or EXXON®, are considered “fanciful.” These are particularly good trademarks because their uniqueness makes them instantly identifiable with a particular manufacturer or service provider. An “arbitrary” word mark is one wherein the chosen word has no sensible or reasonable association with the products or services offered, *e.g.*, APPLE® for computers and consumer electronics. If a mark is like the above examples, the exclusive right to use the mark is easier to assert against potential infringers.

Descriptive trademarks that simply describe what you are selling, *e.g.*, “cheesy puffs,” are usually poor choices because it is harder to get trademark protection for words that are descriptive. A trademark application containing descriptive word marks generally takes longer to process and is usually rejected unless the applicant can show that the words have obtained secondary meaning in the consumer marketplace. The same applies to geographically descriptive trademarks. Word marks that are considered “generic” are not afforded any trademark protection, *e.g.*, using the words “color television” to sell a color television.

Some questions to consider when selecting a trademark are:

- What are the associated implications of the name? Any negative connotations may not attract consumers to your product.
- Does the name fit the product? If the name is misleading, consumers may not realize what your product really does.
- Is the name too difficult to pronounce or remember? Either one may keep consumers from buying your product.
- Is the name too similar to another product? If the mark is confusingly similar to another product, consumers may confuse the two products. “Confusing Similar” requires detailed legal analysis, but on a very basic level, it means that the mark looks or sounds similar. You could also be sued for trademark infringement.

Trademark Registration Requirements

In order to be granted state trademark protection, you must currently use the mark in connection with goods or services within the state.

In order to be granted federal trademark protection, you must do one of the following:

- You must use the mark on goods that are shipped or sold, or services that are rendered, in interstate or international commerce.
- You must apply for trademark registration based on a bona fide intent to use the mark in commerce within 6 months. The trademark will not be federally registered until the mark is actually used in commerce.

There is no time limit on filing a trademark application. However, it is in your best interest to register the trademark before someone else does. A separate application is required for each trademark.

The Internet domain name, also known as the URL, of your website may also be registered as a trademark. The USPTO follows the same policy of registering domain names as with other registerable trademarks or service marks.

Trademark Search

Before adopting a company name, logo, tag line, or other design or trademark, you should first perform a preliminary search of existing trademarks. Adoption of a new trademark can entail spending large amounts of money; money that could be wasted if you adopt a mark that is already in use elsewhere. Therefore, it is important to make sure that your mark is not confusingly similar to a trademark that is currently in use by a company. If your mark causes confusion between your product and another company's product, the other company could file a lawsuit against you.

As with patent searches, a trademark search is best performed by an attorney, but you can perform a free and quick search at the U.S. Documents Department at the D.H. Hill Library on the campus of NCSU. There is an on-line search engine provided by the USPTO at www.uspto.gov/trademarks via the TESS icon. The Trademark Office at the N.C. Secretary of State Office also provides some trademark search services. See Chapter 2, "Perform a patent search" section, for more information on these resources.

Estimated Trademark Costs

The fee for state trademark registration in the state of North Carolina is \$75 for fiscal year 2012. Each renewal costs \$35.

Trademarks are categorized for registration purposes into several different classes, such as, cosmetics, toys, or clothing. The USPTO fee for federal trademark registration currently ranges from (fiscal year 2012) \$275 - 325 for each class of goods/services if you file electronically; filing a paper application costs \$375. If you file your application before you start to use your mark in commerce, there is an addition \$100 fee due per class of goods and services. For example, if your mark will be used on both clothing and toys, a separate registration fee would be required for each class. Each renewal costs \$400. Your total cost can increase if you retain an attorney to assist you.

Applying for Trademark Registration

The filing requirements for **state trademark registration** consist of:

1. A written application form
2. Three examples showing actual use of the mark on or in connection with the goods or services
3. Proof of use or distribution within the state
4. The appropriate filing fee

For more information on state trademark registration, contact:

Deborah Butler, Trademarks Supervisor
The Trademarks Section
Department of the Secretary of State
PO Box 29622, Raleigh, NC 27626-0622

919-807-2162 (phone)
919-807-2215 (fax)
trademrk@sosnc.com

Physical Address:
2 South Salisbury St
Raleigh, NC 27601-2903

The NC Secretary of State has an extensive website that includes an on-line application for trademark registration. See www.secretary.state.nc.us/trademrk/ThePage.aspx.

If you file for a federal trademark registration, you may not need to file for a state trademark registration. Again, an experienced attorney can advise you on your best strategy.

The filing requirements for **federal trademark registration** consist of:

1. Filing a written or electronic application form – The USPTO encourages applicants to complete the electronic application on its website. The website, www.uspto.gov, contains extensive, helpful trademark information.
2. One example of the mark, and one example showing actual use of the mark on or in connection with the goods or services.
3. The appropriate filing fee.

For more information on federal trademark registration, contact information is available at www.uspto.gov/trademarks/contact_trademarks.jsp.

Before applying for trademark registration, an attorney with experience in trademarks should be consulted. Performing a formal trademark search and filing for federal trademark registration can be complex and is best left to an expert. An attorney will provide strategic counsel on your best approach, and the best terms/ words or designs, as well as the type of classes that may be available for protection. An attorney will also provide insight about which words and symbols should be avoided.

Once the application is filed at the USPTO, a trademark examining attorney will determine whether your mark can be registered.

Copyright Protection

A **copyright** is a form of federal protection for literary, dramatic, musical, artistic, and other works. It protects an idea's "expression" or appearance, but not the idea itself. For example, if you paint a picture of a house, a copyright would only protect the painting; it would not prevent someone else from painting the same house. Painting the house is the "idea" and is not protectable, while the painting of the house is the "expression" and is protectable. Another example would be a software program. A software programmer can use copyright protection to prevent others from copying the source code, but the copyright cannot prevent others from developing different code that performs similar functions. Additionally, copyright protection is not extended to mere facts and statistics.

Copyright protection is based on originality and fixation. Originality does not mean novelty, *i.e.*, newness; it only means that the copyright claimant did not copy from someone else. Fixation means that the idea is expressed in some kind of tangible medium, *e.g.*, in a book, a painting, a video, a sound recording, etc.

The owner of a copyrighted work has the exclusive right to perform and authorize any of the following actions:

- reproduce or make copies of the work
- adapt the work by updating, combining it with other works, or otherwise reorganizing it
- license or otherwise distribute copies of the work to the public, by sale, rental or otherwise
- publicly perform or display the work

Copyright Notice

The copyright notice for federally registered written, visual, and video works includes ©, the year of first publication, and the name of the copyright owner. An example would be: © 1996 Jane Doe. A "P" enclosed in a circle is used for audio works ("phonorecords"). For non-registered works, the use of "Copyright" indicates a claim to common law rights. While this copyright notice is no longer a legal requirement, it is recommended. Federal registration provides greatest protection. For more information, see below, Obtaining Copyright Protection.

Copyright Ownership

Under the Copyright Act, as soon as a copyrightable work is recorded in some concrete way, in a "fixed form," the author of the work has ownership of the copyright. Authors of a joint work are deemed co-owners of a copyrightable work, unless there is an agreement to the contrary. The "work for hire" doctrine of copyright law provides that if an employee creates copyrightable works within the scope of his/her employment; the employer will be regarded as the author, *not* the employee. This issue of ownerships is best addressed in a written legal agreement.

Like patents and trademarks, a copyright is regarded as personal property and can be assigned, willed to heirs, sold, or licensed under a contract.

Copyright Duration

In general, a copyright lasts the length of the author's life, plus an additional 70 years after the author's death. If there are two or more authors of the work, the copyright extends 70 years after the death of the last surviving author. For works made for hire, the copyright lasts 95 years from the first publication date or 120 years from the creation date, whichever expires first.

Obtaining Copyright Protection

The law provides that as soon as a copyright work is created in fixed form, copyright is granted to the author. To acquire federal protection, and the associated statutory rights, you may want to file for U.S. copyright registration. The U.S. Copyright Office provides extensive information on the application process and the various legal protections afforded by copyright law; see www.copyright.gov.

By registering your copyright with the federal government, you gain statutory rights to protect your creation from infringement. Compared to patents and trademarks, the copyright registration is fairly easy and uncomplicated and can probably be performed by most authors/owners without the assistance of an attorney. However, you may want to consult with an attorney if you are unsure whether you should get copyright protection, particularly if you are trying to register software, databases, music, or film.

The typical processing time for applications is from 3-4 months, but this time period can vary based on the volume of applications. The effective date of the registration will be the date the Copyright Office receives all of the required application elements, regardless of how long it takes to process the application.

For more information on registering a copyright or to order or download application forms, or to submit your completed application:

U.S. Copyright Office
101 Independence Ave. SE
Washington, DC 20559-6000
General Information: (202) 707-3000
www.copyright.gov

Chapter 8

INVENTION PROMOTION FIRMS

As an inventor, you may have already noticed the advertisements for firms that offer to help get your invention on the market. These are known as invention promotion or marketing firms. The services that these companies provide typically include patent searches, patent application drafting, solicitation of potential licensees, patent prosecution, and market research. Generally, the patent searches or patent applications these firms do may be fine, but the other services they provide are often questionable given the amount of money that is charged. While there are many reputable firms that provide excellent advice and services, there are just as many firms whose efforts provide little value in return to their costs to you. If you are considering employing an outside firm to help you develop and market your invention, you need to keep in mind what you will be getting for the amount of money required. The following suggestions will help you evaluate these firms.

- **Investigate the company before making any commitments.** Contact the Better Business Bureau (BBB) and the Attorney General's Office (contact information for the N.C. Assistant Attorney General is at the end of this section) in the state in which the company is headquartered. Keep in mind complaints against these companies rarely appear on a BBB report, but all complaints will appear on the Attorney General's Office Report.
- **Request their success and failure rates in writing.** Many of these firms have a zero percent success rate. North Carolina law requires that these firms disclose this type of information.
- **Ask what various names, if any, they have operated under.** Many fraudulent firms in financial or legal trouble will go out of business only to re-open under a new name. If there are any other names, ask them why the name was changed.
- **Look out for deceiving sales practices.** After you show interest in receiving information, you will receive sleek brochures containing what appear to be legitimate endorsements by public officials and satisfied clients. You should pay careful attention to the fine print and "disclaimers" in these brochures. You should not gauge the company's success based on color photos of products they say are on the market. The company's salesman will show great enthusiasm for your invention and suggest that there is great market potential, often before evaluating the invention. Do not let this apparent enthusiasm and high-pressure sales tactic influence your better judgment.
- **Know all fees upfront and ask if they will work on a contingency basis.** Many firms will claim they are willing to take a chance on your invention and then charge you hundreds or even thousands of dollars immediately for their services. If a firm was willing to share in the risk, why wouldn't it work on a contingency basis? Fraudulent firms want money up front because the alternative would force them to produce results.
- **Review any contract carefully.** Make sure the contract contains all agreed upon written and verbal terms before signing. It would be wise to have an attorney review the contract. If the contract involves technology, be sure to receive counsel from an experienced technology attorney who is regularly engaged in this type of practice, to be sure he/she is up to date on the technology issues.

Summary

In general, you should be cautious of any invention promotion firm that:

- offers to evaluate your invention but won't disclose its criteria, system of review or the evaluator's qualifications;
- will not disclose its success and failure rates;
- claims to have special access to manufacturers looking for new products, but won't provide proof of this;
- requests fees upfront and will not work on a contingency basis;
- has promotional brochures claiming affiliations with impressive-sounding organizations.

You may also file a complaint against an invention promotion firm with:

Consumer Protection
Attorney General's Office
Mail Service Center 9001
Raleigh, NC 27699-9001

1-877-5-NO-SCAM
<http://ncdoj.com/complaint.aspx>

Chapter 9

FINAL THOUGHTS

Avoiding Tunnel Vision

Inventors sometimes become shortsighted and may have difficulty separating themselves from their inventions. This can make it difficult to be objective about the invention and can cause difficulties in dealing with other people. For example, overly-possessive inventors might hold on to their invention when they would be better off licensing it to another company. Additionally, inventors may be unable to see flaws in their own inventions that are obvious to someone else who is skilled in the same subject matter. The best solution to inventor myopia is to periodically pull back from the inventive process and look at the big picture, *i.e.*, the business and marketing perspectives, instead of just the details of the invention. Periodically asking yourself the questions below about your available resources and where you want to proceed will help you avoid inventor myopia.

Assessment of Resources

Assess your personal financial situation.

- Do you have the money for a patent?
- Do you have money to start a business?
- Do you have collateral you could use for a business loan?
- Do you know any friends or relatives who could help finance you?

Assess your time constraints.

- Do you work full-time and have little spare time?
- Do you know anyone who has free time who could work with you?

Assess your personal skills.

- Do you have the technical skills to invent your product, *i.e.*, to reduce your invention to practice?
- Do you have the required skills to start a business, *i.e.*, accounting, finance, manufacturing, marketing, sales, etc.?

Assess your personal drive and goals.

- Do you have the determination to fight a potentially uphill battle for multiple years?
- Do you want a business or are you unrealistically expecting a quick path to success?

Legal Assessment

- Determine what you want to do with your patent and what type of business you want. Do you want to license your invention? Do you want a privately owned business, a partnership, or a public corporation?
- Make sure you have written agreements and contracts when dealing with any individual concerning your invention or your business.
- Find out what other legal items are necessary to start a business, *i.e.*, business licenses, tax numbers, etc. This information can be found in the *Business Start-up and Resource Guide*, which is available at your local SBTDC office.

Have We Scared You Off?

We hope not, but the development of your idea is likely to be as demanding as it is exciting. As you move forward, the SBTDC staff is available to counsel and help with typical business problems as well as provide advice on marketing, accounting, financing, manufacturing, and human resources.

APPENDICES

A. Vocabulary List

Throughout the text of this booklet are certain words that you should know. The first time the word is defined, it is printed in ***bold and italicized*** type. You should make a list of these terms and understand their meaning and importance to inventing, product development, and marketing the product. These terms are listed below with references to the page where they were first mentioned.

Term	Page	Term	Page
assignment	23	patent agent	14
business plan	48	patent attorney	14
claim	10	plant patent	9
confidentiality agreement	16	prior art	10
continuation-in-part	21	prototype	19
continuing application	21	royalty	22
copyright	36	service mark	32
design patent	9	specification	10
foreign filing license	20	trademark	32
intellectual property	8	utility patent	9
license	23	venture capital	48
patent search	13		

B. Frequently Asked Questions

Patents

Can I use the term “patent pending” or “patent applied for” if I am planning to get a patent?

No. The only time you may use these terms is if your application is already filed and under examination by the Patent and Trademark Office. Even then, the terms “Patent Pending” and “Patent Applied For” afford no per se legal protection.

Is a patent search required before applying for a patent?

No. But performing a patent search before filing a patent application is highly recommended. If the search reveals a similar device patented in an earlier patent, you may avoid the costs of filing for a patent that will fail to be granted. Performing a patent search can also help you to avoid patent infringement.

Is a patent required on an invention prior to the inventor selling it?

No. However, you will only have the right to prevent others from making, using, or selling the invention if a patent is obtained on it. Also keep in mind that if you still want a patent after you begin selling the invention, you must file your patent application within one year of commercialization.

Is a prototype required for filing a patent application?

Not usually. Most patent agents and attorneys will not recommend providing a prototype to the USPTO because prototypes must be maintained by the patent owner for the duration of the patent term.

Can protection be preserved on an invention before a patent is applied for?

Although your invention cannot have patent protection until a U.S. patent is issued on the invention, you can still take measures to preserve some protection on it before filing an application. This can be done by establishing evidence of your invention’s progress (e.g., inventor’s notebook) and keeping the invention a secret.

May a patent be transferred?

A patent is regarded as personal property, and the owner may sell all or part of his interest in a patent to anyone by a properly worded assignment. This will transfer ownership of the patent to an assignee who then has the right to exclude others from making, using, or selling the invention. If someone other than the patent owner wants to make, use, or sell the invention, a license is required.

Can I apply for a patent without going through an attorney?

Yes. However, since the U.S. Patent and Trademark Office rules concerning patent applications are complex and change periodically, it is recommended that an inventor use the services of a patent agent or attorney in order to have the best protection for your invention.

Is it possible to obtain a patent for an improvement made on a device or process that’s already been patented?

Yes. You may obtain patent protection for an improvement to an already patented device.

Copyrights

Why would I want to register a copyright if copyright protection is automatic upon the work's creation?

Registering a copyright on your work would offer you procedural advantages if you ever needed to prevent the unauthorized copying of your work, and certain statutory damages against the infringing party are only available if the copyrighted work is registered.

When does an employer own the copyright?

If a work is created within the scope of an employee's duties or as a "work for hire", copyright law deems the author of the work to be the employer. Therefore, the employer would then own the copyright.

May a copyright be transferred?

Yes. As with patents and trademarks, a copyright is regarded as personal property and can be transferred to another party through use of an assignment. Copyrights may also be willed to heirs, sold, or licensed under a contract.

Trademarks

May a trademark be transferred?

Trademarks are regarded as personal property and can be transferred through use of a properly worded assignment.

If I'm using a trademark that's similar to someone else's trademark, is that infringement?

If your mark is similar enough to someone else's trademark to cause confusion in the mind of the consumer regarding who is the producer of the goods/services at issue, you can be sued for trademark infringement.

C. Helpful Contacts

Patent, Trademarks, & Copyrights Information

U.S. Patent & Trademark Office

USPTO Headquarters – Main Campus Address
Madison Buildings (East & West)
600 Dulany St
Alexandria, VA 223134
(800) 786-9199
www.uspto.gov/about/contacts/index.jsp

U.S. Copyright Office

101 Independence Ave., S.E.
Washington, DC 20559-6000
(202) 707-3000
www.copyright.gov

N.C. Dept of the Secretary of State (Trademark Division)

(919) 807-2162
secretary.state.state.nc.us/trademark/TMUs.aspx

D.H. Hill Library *(access to patents archive)* NC State University

(919) 515-3364
www.lib.ncsu.edu/about/dhhill

Patent and Trademarks Enforcement Assistance

U.S. International Trade Commission

500 E St, SW, Washington, DC 20436
(202) 205-2000
www.usitc.gov

Electrical and Safety Consumer Testing Agencies

Underwriters Laboratories

2600 NW Lake Rd, Camas, WA 98607-8542
(877) UL-HELPS
www.ul.com

Canadian Standards Association

CSA Group Head Office
178 Rexdale Blvd., Toronto, Ontario, Canada M9W 1R3
(416) 747-4000
www.csa.ca

American Council of Independent Laboratories (ACIL)

1875 I St, NW, Ste. 500, Washington, DC 20006
(202) 887-5872
www.acil.org

Legal Referrals & Assistance

North Carolina Bar Association

8000 Weston Pkwy, Cary, NC 27513
(919) 677-0561
www.ncbar.org

N.C. Lawyers Referral Service

(800) 662-7407
www.ncbar.org/public-pro-bono/lawyer-referral-service.aspx

North Carolina State Bar

208 Fayetteville St, PO Box 25908, Raleigh, NC
27611-5908
(919) 828-4620
www.ncbar.com

D. Free or Inexpensive Journals and Publications

Journals

Intellectual Property

For a list of on-line Intellectual Property resources, see Appendix "Internet sources of patent, trademark, or copyright information."

Inventors Digest www.inventorsdigest.com

Bi-monthly publication with online version.

Entrepreneurship & Small Business

Entrepreneur www.entrepreneur.com

Contains helpful articles on startups, marketing, technology, etc.

Small Business Institute@ Journal (www.sbij.org)

Publishes scholarly research articles related to small business management and entrepreneurship.

Success Magazine (www.success.com)

Focuses on personal and organizational effectiveness.

Business & Economics News

Financial Times www.ft.com/home/us

Inc Magazine www.inc.com

Investor's Business Daily www.investors.com

Charlotte Business Journal www.bizjournals.com/charlotte

Triad Business Journal www.bizjournals.com/triad

Source for business news in the Greensboro / Winston-Salem area.

Triangle Business Journal www.bizjournals.com/triangle

Source for business news in the Raleigh-Durham area.

Wall St Journal <http://online.wsj.com>

Marketing

Advertising Age www.adage.com

Website also contains a section for American Demographics, see: www.adage.com/section/american-demographics/195

Adweek www.adweek.com

To Search for Articles

The *UMI ProQuest Direct* periodicals database is available at all libraries participating in NC Live. Through this resource you can search for articles from the New York Times, the Wall St Journal, and other publications. Most often the full text of an article you find in the database is available and can be viewed on the screen or printed up. Ask for librarian assistance.

Many public libraries and most university libraries have *InfoTrac*. Through this database, you can search for articles categorized by Standard Industry Classification codes or by an expanded academic index. The full text of some articles is within the database. Ask for librarian assistance.

Publications

Small Business and Technology Development Center (SBTDC) www.sbtdc.org

See listing of publications at www.sbtdc.org/resources/publications

Capital Opportunities for Small Businesses
Business Start-up and Resource Guide

U.S. Patent & Trademark Office www.uspto.gov

The following are available free on-line or in booklet form. See the USPTO website to order publications.

Basic Facts about Patents
Basic Facts about Trademarks
The Disclosure Document Program

The Small Business Administration (SBA) www.sba.gov

Ideas into Dollars
Avoiding Patent, Trademark & Copyright Problems
Trademarks & Business Goodwill

Licensing Executives Society www.lesusacanada.org

The Basics of Licensing

U.S. Copyright Office www.copyright.gov

Copyright Basics
Publications on Copyrights

American Bar Association www.americanbar.org

These publications are not free, but they are not prohibitively expensive.

Marketing Your Invention (\$20.00)
What Is a Patent? (\$22.00)
What Is a Copyright? (\$22.00)

E. Other Recommended Readings

These publications, as well as others, are available at your local library and/or bookstores:

Business plan assistance

- Covello, Joseph. Your First Business Plan. 2nd ed. Sourcebooks, Inc., 1995.
- Kahrs, Kristin and Koek, Karin, eds. Business plans handbook: a compilation of actual business plans developed by small businesses throughout North America. Gale Research, Inc., 1995.
- Siegel, Eric S. The Ernst & Young Business Plan Guide. 2nd ed.. Wiley, 1993.
- Bangs, David H. Business Planning Guide. Upstart Publishing Co., 1989.
- Mancuson, Joseph R. How to Write a Winning Business Plan. Prentice Hall Press, 1985.

Invention Promotion

- Levy, Richard C. The Inventor's Desktop Companion. Visible Ink Press, 1995.
- Smith, Martin C. How to Avoid Patent, Marketing, & Invention Company Scams. Wow! What a Great Idea. Now What? 1995.
- Fussel, David. The Secret to Making your Invention a Reality. Invention-Press, 1994.
- Gold, Robert J. Eureka! the entrepreneurial inventor's guide to developing, protecting, and profiting from your ideas. Prentice Hall, 1994.
- Franklin, Reece A. How to sell and promote your idea, project, or invention: an excellent marketing guide for both novice and seasoned inventors. Prima Pub., 1993.
- Mosely, Thomsas, Jr. Marketing Your Invention. Upstart Publishing Co., 1992
- Sperry, Robert M. You've Got an Idea-- Now What? Woodland Hills B&B Enterprises, 1992.
- Griffin, Gordon D. How to Be a Successful Inventor; Turn Your Ideas into Profit. John Wiley and Sons, Inc., 1991.
- Winfield, Armand G. The Inventor's Handbook. Prentice Hall, 1990.
- Grissom, Fred and Pressman, David. The Inventor's Notebook. Nolo Press, 1989.
- Lynn, Gary S. From Concept to market. John Wiley & Sons, Inc., 1989.
- Park, Robert. The Inventor's Handbook; How to Develop, Protect, & Market Your Invention. BetterWy Publications.

Patents

- Carr, Fred K. Patents handbook: a guide for inventors and researchers to searching patent documents and preparing and making an application. McFarland, 1995.
- Redman, Tina. The Inventor's Handbook on Patent Applications. Vantage Press, 1993.
- Peterson, Stuart R. Patents, getting one--: a cost-cutting primer for inventors. Academy Books, 1990.
- Pressman, David. Patent It Yourself. Nolo Press, 1989. *(be careful using this if you want a good patent.)*

Venture Capital

- Venture Economics Staff. Pratt's Guide to Venture Capital Sources. 20th ed. Phoenix Oryx Press, 1996.

F. Internet Sources of Patent, Trademark, or Copyright Information

Many of the following sites have been mentioned in the text of this document. We have listed them here for your convenience.

SITE	PERTINENT CONTENT	WEB ADDRESS
U.S. Patent and Trademark Office (US PTO)	Patent-search resources; explanation of patent and trademark application process; application forms; USPTO bulletin	www.uspto.gov
USPTO's Independent Inventor Resources Site	The Independent Inventor site is dedicated to serving the special needs and interests of the independent inventor and entrepreneur	www.uspto.gov/inventors/index.jsp
US Copyright Office	Copyright application process; application forms	www.copyright.gov
University of Washington Engineering Library	Patent-search resources	www.lib.washington.edu/engineering
MicroPatent	Subscription service providing patent and trademark information and searches.	www.micropat.com/static/index.htm
Franklin Pierce Law Center	Patent information	www.ipmall.info
AwakenIP	IP/Patent information	www.awakenip.com
Templeton's Copyright Myths	Website of Brad Templeton, former chairman of the Electronic Frontier Foundation.	www.templetons.com/brad/copymyths.html
European Patent Office	European-focused patent information; links to other internet resources for patent information	www.epo.org
NC Small Business and Technology Development Center (SBTDC)	Information about services; links to state and federal sites	www.sbtcd.org

G. North Carolina Patent Attorneys & Agents Registered to Practice before the U.S. Patent and Trademark Office

For up-to-date regional listings visit <http://oedci.uspto.gov/OEDCI/> to run your own search or you can obtain a list of patent attorneys and agents, listed alphabetically by geographic region, from the U.S. Government Printing Office: Superintendent of Documents; PO Box 371954; Pittsburgh, PA 15250.

Aberle, Timothy J
Corning Cable Systems LLC
PO Box 489
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H. Associations

Intellectual Property Associations

Listed below are various inventors associations that may be beneficial while going through the process of developing and securing rights in intellectual property. Most associations have membership fees.

Association	Contact	Activities
American Society of Inventors	PO Box 58426 Philadelphia, PA 19102 215/546-6601 www.asoi.org	Works with government to improve inventor environment; encourages invention/innovation; sponsors educational programs
Intellectual Property Owners Association	1501 M St. NW, Ste. 1150 Washington, D.C. 20005 202/507-4500 www.ipo.org	Seeks to strengthen the patent, trademark, copyrights, and trade secret laws; monitors legislative activities; awards and publications
Inventors Assistance League, Inc.	1053 Colorado Blvd., Ste. G1 Los Angeles, CA 90041 818/246-6542 www.inventions.org	Brings together inventors and manufacturers; helps bring products to marketplace; speakers' bureau, museum, Hall of Fame
International Inventor's Guild	www.inventorsguild.org	Membership access to patent information; patent research; market analysis
Inventor's Workshop International Education Foundation (IWIEF)	PO Box 285 Santa Barbara, CA 93102 805/735-7261 www.inventorsworkshop.info	Instruction, assistance, and guidance in patent searches, patent protection, developing and marketing inventions, etc.; conducts seminars and research; reference library
National Congress of Inventors Organizations (NCIO)	8306 Wilshire Blvd., Ste. 391 Beverly Hills, CA 90211 800/458-5624 www.inventionconvention.com/ncio	Inventor education programs; speakers bureau
United Inventors Association of America	1025 Connecticut Ave., Ste. 1000 Washington, D.C. 20036 www.uiausa.org	Information on Patent Reform; grant information and referrals for inventors; <i>Inventor's Digest</i> publication; active liaison with the USPTO

Trade Associations

If you manufacture and sell your invention, you most likely would benefit from membership in an appropriate trade association. We do not have space here to include the numerous trade associations in this country. If you are interested in joining a trade organization, we suggest that you refer to the *Directory of Associations*, which lists associations by category and SIC code. A copy of the directory should be available in your local public library.

I. Finding Necessary Goods and Services

Although this publication cannot include a comprehensive list of the companies you will need to do business with while developing, manufacturing, marketing, and/or selling your invention, we can provide guidance for identifying the appropriate businesses to meet your needs.

The North Carolina Business Directory, in book or CD-ROM form, is a valuable resource for locating businesses. In the *Directory*, businesses, along with their locations and phone numbers, are listed by categories; individual categories are identified by their Standard Industry Classification (SIC) code. SIC codes are the Department of Commerce's method of cataloguing the nation's industries. The *SIC Code Manual* also pairs industry categories with their codes. OSHA has a website, www.osha.gov/oshstats/sicser.html, where you can access and search the 1987 *SIC Code Manual*.

Below are some examples of businesses, along with their official SIC code and category. Using this list, along with the SIC Manual and the most recent NC Business Directory (available at your local library), you should be able to create a list of local businesses that you can contact regarding products and services you may need.

Business Category	SIC code	Example of services, products you would need
Market Evaluators	8748	Determining the profitability of a proposed invention and/or business
Product Development & Marketing	8732-03	Prototype building
Product Development & Marketing Consultants	8748-06	Advice on bringing your invention to market
Laboratories – Testing	8734-02	Safety testing of product
Parts and Materials Suppliers	Various—look up the appropriate industry	Components for your product before or after development
Advertising Agencies	7311	Advertising once product is manufactured
Direct Mail Advertising	7331	Same
Freight Traffic Service	4731-06	Shipping product
Direct Mail Providers	4513	Contacting retailers of the product
Internet service	7374-15	Hook-up
Internet Home Page Development Consultants	7374-16	Building a home page for marketing and information purposes
Inventors	8999-19	Beware! This category includes invention promotion firms (see "Invention Promotion Firms")

The American Business Directory (AmBus) can also provide SIC-grouped businesses on a national scale. The AmBus database is available at all libraries participating in NC Live (this includes NC public libraries, UNC system libraries, community college libraries, and the 36 members of the NC Association of Independent Colleges and Universities).

As emphasized throughout this booklet, the Internet is also an excellent way to search for businesses appropriate to your needs. Online business databases can supplement your *NC Business Directory* search—*The Thomas Register of American Manufacturers* (www.thomasnet.com) and *Hoover's Standard* (www.hoovers.com).

If you are looking specifically for laboratories to test/develop your invention, you might also want to find out whether a local university offers testing services. Contact the university's Technology Transfer office or the appropriate academic department or prototyping for information. In North Carolina, Duke University, North Carolina A&T, North Carolina State University, UNC-Chapel Hill (in biomedical, chemical, and environmental engineering only), and UNC-Charlotte have engineering colleges. East Carolina University has a Department of Engineering in its College of Technology and Computer Sciences, and Western Carolina University has a Department of Engineering and Technology including a Center for Rapid Product Realization in its Kimmel School.

K. General business information and assistance resources

If you still have questions concerning how to proceed with your invention or starting a business, the following resources are available:

Small Business and Technology Development Center (SBTDC)

An *SBTDC general business counselor* can provide advice on starting a business. Below are the numbers for local SBTDC offices:

Asheville	(828) 251-6025	Greensboro	(336) 256-9300 (<i>NCA&T Office</i>)
Boone	(828) 262-2492	Greensboro	(336) 334-5724 (<i>UNCG Office</i>)
Chapel Hill	(919) 962-0389	Greenville	(252) 737-1385
Charlotte	(704) 548-1090	Hickory	(828) 345-1110
Cullowhee	(828) 227-3504	Pembroke	(910) 775-4000
Durham	(919) 530-7386	Raleigh	(919) 600-6093 (<i>NCSU Office</i>)
Elizabeth City	(252) 335-3247	Wilmington	(910) 962-3744
Fayetteville	(910) 672.1727	Winston-Salem	(336) 750-2030

If you are not sure which office to call, you may contact the SBTDC Headquarters in Raleigh at (919) 715-7272 or visit www.sbtcd.org/offices for detailed information for each office.

Small Business Center Network (SBCN)

The Small Business Centers at your local community college (business start-up information and services) www.ncsbc.net

U.S. Small Business Administration (SBA)

Charlotte Office, 704/344-6563 www.sba.gov

Local Libraries

Local public library or college/university library

Online Resources

Various websites listed in this publication



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