



***Intellectual Property Guide:
Patents, Trademarks, and Copyrights***
A Resource Tool for Businesses and Inventors

*Prepared by the Small Business and Technology Development Center (SBTDC),
a business development service of The University of North Carolina system
operated in partnership with the US Small Business Administration (SBA).*

This publication is provided 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.

Editor: Bentley J. Olive
SBTDC Fall Extern (1999)
The University of North Carolina School of Law

Edited by: John A. Craichy
Scott Daugherty
Ron Ilinitch

Published by: University of North Carolina Press, Copyright © 1999 Small Business
and Technology Development Center; all rights reserved.

This booklet is designed to provide useful information and is provided to the reader with the understanding that neither the author, editors, nor the publisher is engaged in rendering paid legal, financial, or professional advice. If such expert assistance is required, the services of a competent professional should be sought. The information provided does not constitute specific recommendations to be used for decision-making purposes by the individual reader.

This work is partially supported by the U.S. Small Business Administration through Cooperative Agreement #SB-2M-00110-15. Any options, findings, conclusions, or recommendations expressed in this publication are those of the author and do not necessarily reflect the views of the U.S. Small Business Administration.

Table of Contents

Introduction	3
1. General Patent Information	4
What is a patent	4
Patent contents	4
Conditions for a patent	5
Who may obtain a patent	5
When a patent may be obtained	5
Obtaining a Patent	6
Recent patent law changes: GATT	6
Ownership and sale of patent rights	7
2. Determining Whether to Patent	8
Perform a patent search	8
Will your invention sell?.....	9
Evaluate marketability	9
Protecting the invention while assessing marketability	11
3. Pursuing a Patent	14
Retain a patent attorney/agent.....	14
Drawings.....	14
Reduce idea to practice: Prototypes	15
Product testing	16
Filing the patent application	16
Process at the Patent and Trademark Office	16
Estimated patent costs and time	18
Funding a patent	18
Enforcing patent rights	18
Alternatives to patents	19
What to do after getting a patent	19
4. Patent Assignments & Licensing Agreements	20
What is a patent assignment?	20
What is a license?	20
Pros and cons	20
Selecting the right licensee	21
Contacting the company	21
Initial presentation	22
Negotiating the license agreement	22
What to expect after signing	23
5. Starting Your Own Business	24
Start-up capital	24
Marketing Issues	24
The Internet	26
Registration and Licensing.....	?
Other considerations	?
6. Financial and Market Research	28
Marketing research	28
Financial research	29
Analyzing the results	30
7. Invention Promotion Firms	37
8. Special Inventor Assistance & Resources	39

Wal-mart Innovation Network (WIN)	39
Support American Made.....	39
Wisconsin Innovation Service Center (WISC)	40
Inventions and Innovation Program	40
9. Final Thoughts for Inventors	42
Avoiding tunnel vision	42
Assessment of resources	42
Have we scared you off?	43
10. Trademarks & Copyrights	31
Trademarks	31
Trademark notice	31
Trademark benefits.....	31
State vs. federal trademarks	31
Length of trademark protection	32
Selecting a trademark	32
Trademark registration requirements	32
Trademark search	33
Estimated trademark costs	33
Applying for trademark registration	33
Copyright protection	34
Copyright notice	35
Copyright ownership	35
Copyright endurance	35
Obtaining copyright protection	35
Appendices	44
Vocabulary List	44
Most Often Asked Questions	45
Helpful Contacts	47
Free or Inexpensive Publications	48
Other Recommended Readings	49
Internet Sources of Patent, Trademark, and Copyright Information	50
N.C. Patent Attorneys & Agents	51
Sample Confidentiality Agreement (for product development assistance).....	59
Sample Confidentiality Agreement (prospective licensing companies).....	61
Current PTO Fees	63
Associations	64
Finding necessary goods and services	?
General Business Information and Assistance Resources	66

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.

The truth is there are lots of new ideas out there, but only about *one patent out of a hundred* is commercially successful. Although utility patents and plant patents last 20 years and design patents last 14 years, 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. Other costs, such as 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, and/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 for a good or service. Early registration is encouraged in order to be certain that others can be prevented from using the same name or a similar name to reap the benefits of your product or service's good reputation. Copyright protection is available by Federal laws for literary, dramatic, computer software, musical, artistic, and other intellectual works of authorship. Although federal copyright protection is automatically granted once the work is put in a "fixed form," the registrant of a copyrighted work will receive other legal rights plus better proof of the time of authorship. This guide also explains how to register internet domain names.

The North Carolina Small Business and Technology Development Center's Intellectual Property Guide is intended for the independent inventor or small company with little knowledge of how to develop ideas into licensable patents or commercial products. In this booklet, we try to answer the most common questions and provide guidance on commercializing an invention.

1

General Patent Information

What is a patent?

The patent owner has, for a limited time, the *right to exclude others* from making, using, offering for sale, or selling the patented invention throughout the United States or importing the invention into 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 into the United States, products made by that process. There are three different types of patents:

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 chemicals. A process is more difficult to recognize. For example, this 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 ends twenty years from the filing date.

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. As with utility patents, term extensions may be granted in certain instances.

For certain delays attributable to the PTO, 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, his/her heirs, 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 copy of the specification; and (4) drawing(s), if necessary.

The specification is essentially a description of the invention. The specification must contain: (1) a detailed description of the invention; (2) claims to the invention; (3) abstract of the disclosure; (4) oath or declaration; and (5) drawings, if required to understand the invention. The application must state particularly what the inventor believes the invention is. 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 known to him or her at the time of filing of carrying out the invention. Therefore, you can not obtain a valid patent if you have withheld a better version of the invention.

The claims are the most important part of the patent application. 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.

Obtaining a patent

Patents are obtained by filing an application with the U.S. Patent and Trademark Office (PTO) in Washington, D.C. The application is then examined by a specially trained PTO examiner who grants the patent if the requirements are met. The process of obtaining a patent is described in detail in Chapter 3.

Conditions for a patent

As stated previously, a utility patent must be novel, useful, and nonobvious. Design and plant patents have slightly different requirements that are beyond the scope of this guide.

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 claim; claims are discussed below).

Statutory bar focuses on events that may occur more than one year prior to the inventor's patent application and which, if they do, prohibit a patent grant. But after that one year grace period, statutory bar occurs and the inventor(s) loses the right to a patent. Anticipation events, defined by the novelty provisions, have no such grace period; if an anticipation occurs prior to invention, the inventor simply has no right to a patent.

Following are the events raising statutory bar, if they occur more than one year prior to application:

Domestic (Acts within the U.S.): Prior patent by anyone, printed publication, public use, sale.

Foreign: Prior patent by anyone, printed publication, prior patent application by the applicant (but only if a patent is granted prior to domestic application).

Following are the anticipation events that defeat a claim of novelty if they occur anytime prior to invention:

Domestic (Acts within the U.S.): Prior patent by anyone, printed publication, knowledge or unabandoned, unsuppressed, unconcealed invention by others, use by others, or description in another's previously filed and eventually granted application.

Foreign: Prior patent by anyone or printed publication.

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 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 to obtain the invention whose patenting is sought. Additionally, obviousness may be determined by combining what is disclosed

by several pieces of prior art. This provision bars persons from obtaining a patent by modifying prior art in such a way that would be obvious to one of ordinary skill in the art.

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 their rights. 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. “Reduced 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. 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 public disclosure or else the invention is barred by the novelty requirement. In other words, once the invention has been offered for public use or sale in this country for more than a year, the invention is considered as being in the public domain and cannot be patented. The inventor should realize that it may take several months to actually prepare and file the application, so if the invention is publicly disclosed, the application preparation should begin shortly thereafter. Fortunately, in order to quickly get a filing date, and avoid the one year statutory bar, a provisional application may be filed. The provisional application does not require claims, which are time-consuming to draft. Yet, a regular application, including claims, must be still be filed no more than a year after filing a provisional application.

The only exception to the one year rule in the U.S. is the “experimental use” exception. This rule permits some public use to occur for more than a year before applying for the patent if it will help perfect the invention. However, this rule does not apply to situations where the use or sale of the device is mainly for profit and the experimentation is merely incidental. For example, market acceptance testing does not qualify as “experimental use.” It will be the patent office examiner’s responsibility to determine whether the scope and length of the experimental activity is reasonable.

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 PTO. Recordation in the PTO 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 PTO that the assignment is valid or effective.

After a patent is assigned, the assignee becomes the owner of the patent and has the same rights as the original patentee. A conditional assignment can be used, which passes ownership of the patent and is regarded as absolute until canceled by the parties or by a court of law.

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 the invention. 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 patent has already expired. You want to 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 field.

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:

- **D.H. Hill Library, NC State University Libraries:**

The DH Hill Library on the NCSU campus contains 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 (URL: <http://www.lib.ncsu.edu/libraries/risd/govdocs/>) or contact the Government Information & Documents Department at the D.H. Hill Library to find out their hours of operation: Office Phone: (919) 515-2936; fax: (919) 515-8264; reference questions: (919) 515-2935.

- **United States Patent and Trademark Office, Washington, DC:**

The Scientific and Technical Information Center located at Crystal Plaza #3, 2021 Jefferson Davis Highway, Arlington, 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 PTO has a website (URL: <http://www.uspto.gov/>) including 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.

- **MicroPatent** (URL: <http://www.micropat.com/>):

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.

- **IBM Patent Server** (URL: <http://www.patents.ibm.com/>): IBM's Intellectual Property network lets you search and view patent documents from the United States, Europe and Japan as well as patent applications published by the World Intellectual Property Organization (WIPO). It provides free access to more than 2 million U.S. patents issued since 1971, and images of all U.S. patents issued after 1974.
- **STO Internet Patent Search System** (URL: <http://sunsite.unc.edu/patents/intropat.html/>): This is the home page for Source Translation & Optimization's (STO) Internet Patent Search System in which you may perform a patent search and/or access information on the patenting process.
- **NCLive** (URL: <http://www.nclive.org/>) 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.

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. However, the invention cannot be patented again. If a current patent claims *any* part of the invention, its owner has exclusive rights until it expires.

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. This can be done by a registered patent attorney, a registered patent agent, or a specialized patent search company. A patent agent is a technically trained person who has passed a special bar exam to practice before the U.S. Patent and Trademark Office. Patent agents are limited to prosecuting a patent application, i.e., obtaining a patent. A patent attorney has also passed the U.S. Patent and Trademark Bar Examination, but is also permitted to draft contracts and provide other general legal services. 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. The patent attorney/agent's letter detailing a positive search may be valuable in raising capital and encourages others to help in product development. The patent attorney/agent will also 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).

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 valid opinions.

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 exclude only to later regret having done so.

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 growth 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 divulge 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. 8.

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.

Confidential Disclosure 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 **Confidential Disclosure Agreements** (also called confidentiality agreements, 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. There are sample Confidentiality Agreements in section H of the Appendix.

Protecting the invention while assessing marketability

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. But recall that U.S. patent law protects the first one to invent, not the first to file a patent application; however, this is not so in foreign countries. Foreign countries provide priority to the first to submit an application. In addition to using Confidential Disclosure Agreements, there are two more ways to protect the invention before actually filing for a patent:

1. Maintain a dated and signed invention diary/notebook
2. File a disclosure document with the Patent and Trademark Office

Maintain a dated invention notebook

To provide initial protection of your idea or invention, you should write a detailed description of it in an invention notebook. This will serve as a daily diary of legal evidence which shows you have been working diligently to make the invention work. In addition to providing a record of the idea's conception, the work diary is also a good way of monitoring where you are in your invention process and what remains to be done.

Imagine that after being granted a patent and having a commercially successful product, you receive a notice of a lawsuit from someone claiming to be the original inventor of the product. The court would need to determine who was the original inventor based on evidence. The invention diary could be enough evidence to convince the court that you are the inventor. Quite often, a completed work diary has been submitted in court as evidence to be accepted by the court to validate the original inventor's claim.

For the best protection, the following guidelines should be followed when keeping an invention notebook:

- 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.

File a disclosure document with the PTO

Another way to prove the idea's date of conception is to file a disclosure document describing the invention with the PTO's Document Disclosure Program. The benefits provided by the Disclosure Document will depend upon the adequacy of the disclosure. It is recommended that the document be clear and complete explanation of the manner and process of making and using the invention. This description must be in sufficient detail to enable a person having ordinary knowledge in the field of the invention to make and use the invention. When the nature of the invention permits, a drawing or sketch should be included.

The document is not prior art nor does it provide a filing date or domestic priority. It is only good for proof of the conception of the invention and legally is given no more weight other than proof. The PTO keeps the document on file for two years. At that time, it's destroyed unless it's referred to in a separate letter in a related patent application.

Note that you cannot just file the disclosure document and do nothing with the invention in the two years following. If in the event another inventor tries to claim credit for the invention, you will only receive full benefit of the disclosure if you can also prove you've been working diligently to complete the invention or if you file the patent application.

To participate in this program, the following materials must be sent to the PTO:

1. Photocopies of the entire Disclosure Document (including written matter, drawings, sketches, or photographs). This material must be on white paper having dimensions not to exceed 8½ by 11 inches (21.6 by 28.0 cm.) with each page numbered. Text and drawings must be sufficiently dark to permit reproduction with commonly used office copying machines. Oversized papers, even if foldable to the above dimensions, will not be accepted. Attachments such as videotapes and working models will not be accepted and will be returned.
2. A separate signed cover letter stating that it is submitted by, or on behalf of, the inventor and requesting that the material be received into the Disclosure Document Program. A sample would run as follows:

"The undersigned, being the inventor of the disclosed invention, requests that the enclosed papers be accepted under the Disclosure Document Program, and that they be preserved for a period of two years."
3. A fee, in the form of a check or money order, made payable to "Commissioner of Patents and Trademarks." In fiscal year 1998 the fee is \$10. The fee is subject to change annually.

Mail the materials and payment to:

Box DD
Assistant Commissioner for Patents
Washington, DC 20231

They will not return the original submission. The PTO will mail you a notice with an identifying number and date of receipt in the PTO. They will emphasize that you should rely on the Disclosure Document only as evidence and that you should file a patent application if you seek patent protection.

For up-to-date information visit the website at URL: <http://www.uspto.gov/web/offices/pac/disdo.html>

3

Pursuing a Patent

Retaining a patent attorney/agent

Regardless of who you hire to perform the complete 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 PTO's website at URL: <http://www.uspto.gov/go/attorney/region/>, or you can obtain a list, organized by geographic region, from the U.S. Government Printing Office: Superintendent of Documents; Post Office Box 371954; Pittsburgh, Pennsylvania 15250-7954; 202/512-1800. To avoid any surprises, know what the hourly and fixed rates are up front. In selecting one, make sure you can work with him/her because you will have a long-term relationship together. 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 know you will want a manufacturing company to produce your product, you should look into having a machine shop or prototype shop produce engineering drawings for you after the prototype is complete and tested. Manufacturers often look for these 3-D cross-section dimensional blueprint drawings for accurate manufacturing pricing.

Patent drawing. These are necessary for utility and design patent applications. The PTO 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 works with.

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 a bright idea and write it down in an inventor's workbook. It's an entirely different matter to actually demonstrate that the invention works. While a prototype is not required to apply for a patent, having one can be very helpful. Not only will it help you in your product development efforts, but it will also give you a stronger claim to the idea if you have it reduced to practice before someone else.

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 “gerryrig” the invention using glue, cardboard, tape, etc. Some resources for other supplies you may need can be found in the Yellow Pages, the *Thomas Register of American Manufacturers* (URL: <http://www.thomasregister.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:

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 a job shop, 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 (formerly the American Council of Independent Laboratories)
 1629 K Street, NW
 Washington, DC 20006
 Telephone: 202/887-5872
 Fax: 202-887-0021
 E-mail: info@acil.org
 URL: <http://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

You can obtain a hard copy of the brochure “General Information Concerning Patents,” which includes a patent application, from the U. S. Government Printing Office (202/783-3238). The PTO’s website includes a guide to filing a utility patent application at URL: <http://www.uspto.gov/web/offices/pac/utility/utility.htm/>.

The requirements for the patent application include:

- A written document with an enabling specification (a satisfactory description of the invention with at least one claim) and an oath or declaration that the inventor is the original inventor.
- A complete drawing, where necessary.
- The appropriate filing fee. (See “Estimated patent costs and time” below.)

As mentioned earlier, the process of filing a patent application can be very challenging, and you will receive the best results through the use of a patent attorney or agent.

Process at the Patent and Trademark Office

For purposes of this discussion, let’s say you employ a patent attorney for filing your application. Once the application is received at the PTO, your attorney will receive a filing receipt with the filing date and serial number for the application. At this time, you will also 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, the PTO will withhold a Foreign Filing License.

The application is then checked for any deficiencies. If any of the above requirements are missing, the application will be cited as incomplete and will be refused acceptance. The filing fee may be refunded, but a handling fee or surcharge may be applied. You will be given a specified period of time to complete the application (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 PTO Department for examination.

The patent office receives over 200,000 patent applications per year. Depending on the backlog of unexamined applications your examiner has, 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 two or three office actions which are given in the form of letters. If one or more claims are rejected by the examiner, a letter will be sent to your attorney. A proper response will have 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. It may be a Notice of Allowance indicating approval of the patent application. It may also be another rejection that you would have to respond to. Usually the second or third action is marked as the final decision.

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 filing, or else a continuation-in-part must be filed to add new disclosure. These afterthoughts can be expensive and support why it is beneficial to hire an expert to help file your application.

If the final decision is a rejection, you may request a personal interview with your examiner. If he/she agrees, you can meet at the PTO with your attorney to plead your case. This would be your chance to demonstrate your prototype, discuss claims, and suggest how the claims could be reworded. Examiners are evaluated primarily by the number of applications they process, which means there is no guarantee they will spend very much time on one application. Therefore, it is possible that once rejected claims will be allowed later.

Estimated patent costs and time

Direct patent costs	US PTO fees (Fiscal Year 1999)	Attorney's fees	Other potential costs
Disclosure document	\$10		
Preliminary patent search			\$5-10 for copies
Professional patent search		\$800-1,500	Confidentiality agreements
Application filing	\$165-395	\$2,000-6,000	Photocopying and extra claims
Patent prosecution		\$1,000-3,000	Licensing contracts
Patent issued	\$215-1,210		Corporate legal documents
Renewal fee (3.5 years)	\$940		Possible litigation
Renewal fee (7.5 years)	\$1,900		Possible litigation
Renewal fee (11.5 years)	\$2,910		Possible litigation
TOTAL	\$3,555-4,220	\$3,800-10,500	?

The above PTO fees reflect a 50% discount allowed for small business entities and independent inventors, but are *only a portion* of the fees you may have to pay. In addition, fees change with each fiscal year; for up-to-date PTO fees, check their website,
URL: <http://www.uspto.gov/web/offices/ac/qs/ope/fees.htm>

As you can see, the cost of pursuing and maintaining a patent can cost between \$7,500 and \$18,000. 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 two years, but can take up to four years. 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 (PTO) does not monitor commercial transactions for possible infringement incidences 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 this option depends on the complexity of the case, but legal expenses alone can easily reach into the tens of thousands. Many patent infringement cases are settled fairly quickly, however. 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 PTO 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 time during its lifetime. For example, if the inventors listed in the patent turn out to be incorrect, the patent could be declared invalid.

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.

4

Manufacturing Agreements: Patent Assignments & Licensing

Figure 1

More often than not, 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 a fair profit. Thus, this option is rarely recommended.

What is a license?

A license is a legal contract that gives someone else, like a company, 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. This is a legal contract, best written by an attorney who specializes 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, usually as a percentage of the sales of the invention.

Pros and cons

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, some profit from royalties is better than no profits if you fail to develop your idea or your business goes bankrupt. 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 limited geographic territories. 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 place 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 URL: <http://www.thomasregister.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 line. Other sources of company information include:

- *Hoover's Standard (like the Thomas Register, available in book form or on-line):*
URL: <http://www.hoovers.com/>
- *Encyclopedia of American Industries*
- *NC Manufacturers Register*
- *NC Business Directory*
- *Securities and Exchange Commission (SEC) website, URL: <http://edgar.sec.gov/index.html>*
- 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, consider each company's product line, distribution breadth, management, marketing style, any legal troubles that may exist, 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 the company

It is extremely 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. These companies have their own research laboratories working on inventions and therefore suffer from the "Not invented here" syndrome; i.e., since they didn't invent it, they don't 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, the tactics you use when first contacting the company can make or break you. Here are some tips:

- Whether you begin contact by correspondence or phone is up to you. However, contacting the company by phone will give you more of a chance to explain who you are and your expertise. You also stand a greater 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). This will help establish some credibility for yourself.

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 further that you develop your idea, the greater the chances that you will 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 has been applied for. Remember that you have to convince them that they will make a higher percent profit by selling your product than if they sold their existing products. Presenting a well developed market analysis and a manufacturing cost estimate to a potential licensee will help you sell them on licensing your invention. You should also try to have a confidentiality agreement signed by the company since you are disclosing the details of your invention to them. However, do not be surprised if your request meets a lot of 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 of your meeting with the company. There are several terms within a license agreement that you should consider beforehand:

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	This "escape" clause would give you and/or the manufacturer a way out if there is any unsatisfaction during the length 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 is begun. 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.

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. While it is not impossible for you to do, there is a lot more involved in the process than you may realize.

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.

Start-up capital

How will you raise funds for buying land, a building, equipment, etc.? Access to capital will be 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 either reconsider if the time is right to go into your business or consider external sources of capital.

Further, you may consider external sources such as debt financing, 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 not a common 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 and Technology Transfer (STTR) programs for research and development and technology commercialization projects meeting specific government solicitations (See SBTDC's website, URL: <http://www.sbt dc.org/>, for more information; also, for a more complete listing of financing resources, see the SBTDC publication, *Capital Opportunities for Small Businesses*, at the SBTDC website or call 919/715-7272).

Marketing Issues

How will you effectively and efficiently make potential customers aware of your product? Marketing concentrates 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 effect 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 are available to help (See SBTDC's website, URL: <http://www.sbt dc.org/> for more information).

The Internet

Additionally, you may consider making use of the Internet to market your invention. Users of the Internet require a unique domain name for the purpose of accessing a website. Domain names, such as <http://www.sbt dc.org/>, are unique identifiers, which may be registered as a trademark and *must* be claimed and registered by a service called InterNIC. Domain names are available on a first-come, first-served basis through InterNIC. InterNIC's Domain Registration Policy is set forth at

<http://rs.internic.net/policy/internic/internic-domain-3.txt>, and its Domain Name Registration Agreement appears at <http://rs.internic.net/templates/domain-template.txt>. There is a \$70 application fee for new domain names, which covers a two-year period. There is also a \$35 per year maintenance fee.

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 URL: <http://www.secstate.nc.us/secstate/blio/default.htm/>.
- The *North Carolina Business License Information Office* (800/228-8443) can tell you whether your business needs a state privilege license to operate.
- The *Business License Information* line (919/807-2166 or 800/228-8443) can tell you whether you need specific industry licenses and permits.
- All for-profit businesses located within a city's limits must have a privilege license before beginning operations. Call the municipal *Revenue Office* or *Office of Fees and Licenses* for specific information.

Other considerations

- **Manufacturing:** Proving that the product will sell and make a profit is most important question in deciding to start up 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?

6

Marketing and 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 acceptance of your product is to attend trade shows. You may find that this avenue 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 over 9000 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.
- Interview program
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.

To complete your marketing research, you should follow the next three steps using any or all of the above methods and record the results:

- 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

You should perform the following 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 sales price (use the correct sales price for who your customer is: wholesale price if you sell to a distributor, or 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 up all your per unit expenses for manufacturing and selling your product. Make sure you 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 up 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 usual life of a patent) to get an averaged 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 would be appropriate if you were 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 you could use to complete the financial analysis:

1. Pretend you are a manufacturer who 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 approximation of what it takes for success. 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.

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 among others. 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, there are just as many firms whose mission is to take your money while providing little value in return. 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. If you complete their confidential record of the invention, you will then most likely receive an urgent call from a salesman. This 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 cloud your sense of 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. Think about it. If they were willing to share in the risk, wouldn't they 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.

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.

For more information about invention promotion firms or to issue a complaint regarding an invention promotion firm, contact:

Inventors Awareness Group, Inc. (IAG)
1533 E Mountain Rd, Suite B
Westfield, MA 01085-1458
800/288-3938 or 413/568-5561
FAX 413/568-5325
URL: <http://www.cyberadv.net/vhosts/inventorworld.com/iag.htm/>
E-mail: iagbob@aol.com

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

NC Assistant Attorney General
Consumer Protection Section
NC Department of Justice
PO Box 629
Raleigh, NC 27602-0629
919/716-6000
FAX: 919/716-6050
URL: <http://www.jus.state.nc.us/Justice/cpsmain/cpsmain.htm/>

9

Special Inventor Assistance Programs

Wal-mart Innovation Network (WIN)

With a main goal of creating more jobs for American production workers, this program provides evaluation and management assistance to independent inventors. Participants are provided an initial commercial feasibility analysis and a referral to a network of management and technical assistance resources.

Upon submission, an invention is evaluated by a trained specialist on forty-one evaluation criteria. About 20% of the 1 in 5 that survive this evaluation are forwarded to Wal-Mart for a marketability assessment. Recommended ideas and inventions are then referred by WIN to its economic development partners throughout the United States for assistance in development, licensing, or commercialization. This program is not an innovation development or marketing service since commercializing the idea or invention is ultimately the inventor's responsibility.

The only WIN fee is the initial evaluation fee (\$175). However, the economic development partners may charge for some of their services. For more information on WIN, contact:

Wal-Mart Innovation Network
Center for Business and Economic Development
Southwest Missouri State University
901 S National Ave
Springfield, MO 65804-0089
Telephone: 417/836-5671
URL: <http://www.wal-mart.com/win/>

Support American Made

Also sponsored by Wal-mart, this program assists smaller manufacturing firms and inventors in doing business with large buying organizations. By providing a Product Evaluation and Venture Assessment report, Support American Made helps firms analyze the strengths and weaknesses of their product and venture. In addition to the reports, participants receive a listing of management and technical resource organizations in the state that have agreed to partner with Support American Made. It is recommended that pre-ventures and firms with products that have been on the market for less than a year use the WIN program instead.

For more information on Support American Made, contact:

Support American Made
Wal-Mart Stores, Inc.
702 Southwest 8th St
Bentonville, AR 72716-9002
URL: <http://www.wal-mart.com/sam/>

Wisconsin Innovation Service Center (WISC)

This program is a cooperative effort of the University of Wisconsin-Whitewater, UW-Extension Small Business Development Centers, and the SBA. While WISC does not offer direct invention development or financial assistance, it assists clients in making more informed choices in their product development process. This is done by providing a New Product Assessment. For a flat fee of \$495.00, the program's evaluators perform: a Technical Feasibility Study; a Competition Review; User Needs Analysis; Trends Analysis (industry, regulatory, and demographic); and Research Summary.

For added fees, WISC will provide more specific studies peripheral to intellectual property development: Customer Assessment; Competitive Intelligence Search; Distributor Assessment; Acquisition Search; and a Licensing Partner Search.

For more information on WISC, contact:

Wisconsin Innovation Service Center
402 McCutchan Hall
University of Wisconsin-Whitewater
Whitewater, WI 53190
(414) 472-1365
E-mail: Innovate@UWWVAX.UWW.EDU

Inventions and Innovation Program

The US Department of Energy (DOE) sponsors a grant program for independent inventors and small businesses developing ideas that have a significant impact on energy savings and future commercial market potential. The program provides financial assistance at two levels depending on the stage of development—up to \$40,000 or up to \$100,000. The assistance is given for establishing technical performance and conducting early development of innovative ideas and inventions. In addition, awardees receive technical guidance and commercialization support.

For more information, see the Program's website, URL:
<http://www.oit.doe.gov/Access/inventions/inventions.html/>

10

Final Thoughts

Avoiding Tunnel Vision

Inventors commonly become shortsighted and have a problem separating themselves from the invention. This can make it difficult to be objective about the invention, and can cause difficulties in dealing with other people. For example, over-possessive inventors might hold on to their idea when they would be better off licensing it to another company. In addition, they may be unable to see flaws in their invention that are obvious to someone else. The best solution to inventor myopia is to periodically pull back from the inventive process to look at the big picture (i.e., the business and marketing perspectives) instead of just the details of the invention. Periodically asking yourself the following questions 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?
- Do you have the business skills?
- Do you have the business skills to start a business (i.e., accounting, finance, manufacturing, marketing, sales)?

Assess your personal drive and goals.

- Do you really have the determination to fight an uphill battle for years to come?
- Do you really 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 Startup Kit 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.

7

Trademarks & Copyrights

Trademarks

A trademark is a word, symbol, or even a sound, used by a person or business to identify their goods and distinguish them from similar products offered by others. A service mark is essentially a trademark used to distinguish services instead of goods. Otherwise, trademarks and service marks are in all respects identical.

Trademark notice

The mark for a trademark, TM, usually appears on the product, packaging, or by the upper right side of the words or logo. The mark for a service mark, SM, is normally placed on advertising for the service by the upper right side of the words or logo. The mark, ®, is used only if your mark is federally registered with the U.S. Patent and Trademark Office (PTO).

Trademark benefits

Having a trademark name 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 a patent is. Use of a mark over time results in establishing a connection in the public's mind between the trademark and the goods or services offered by the business. Therefore, the trademark can be a powerful marketing 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 provider of the product. If a person or business is found to be using a trademark that is confusingly similar to yours, thereby infringing on your product trademark, they can legally be made to pay damages to you.

A trademark and its registration can also be transferred to another person or company, much like patent rights, through the use of a properly worded assignment.

State vs. federal trademarks

All states have a system of registering trademarks. However, national trademark registration has numerous advantages over state trademark registration. The acquisition of federal registration allows the registrant to overcome any claims by later users of good faith, 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 more states than that in which it is registered, only state registration is 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. Full trademark protection can be obtained only by filing and obtaining a Federal trademark registration with the PTO and using ® adjacent to the mark. Federal registration extends protection to the owner beyond the actual area of use, making protection from infringers more certain.

Length of trademark protection

Unlike patents, a trademark lasts indefinitely as long it is continued to be used properly. Both federal and state trademark registrations last 10 years and are renewable in 10 year increments. The registration will be canceled in between years 5 and 6 if it is not stated that the mark is currently being used in commerce. For each subsequent renewal, you must continue to submit proof that the mark is still used in commerce.

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 arbitrary or fanciful. Marks that have no meaning in the English language, like KODAK® or EXXON®, are particularly good trademarks because their uniqueness makes them instantly identifiable with a particular manufacturer or service provider. If a mark is arbitrary like the above examples, the exclusive right to use it is easily asserted against potential infringers.

Descriptive trademarks, like “car phone,” that simply describe what you are selling are usually poor choices because they are generally available for everyone to use. The same applies to geographically descriptive trademarks.

Some questions to ask yourself 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 similar to another product, consumers may confuse the two products. 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 reservation based on a bona fide intention 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.

If you choose to make use of the Internet, the domain name, also known as URL, of your website may be registered as a trademark. The PTO follows the same policy of registering domain names as with other registrable trademarks or service marks. A domain name consists of a unique address designating an Internet site; therefore, it may or may not function as a trademark or service mark.

Trademark search

Before adopting a trademark and applying for trademark registration, you should first perform a preliminary search on 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 does not duplicate a trademark that is used by a company producing similar products. 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 PTO at URL: <http://www.uspto.gov/web/menu/tm.html>. 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 \$50 for fiscal year 1998. Each renewal costs \$35.

Trademarks are categorized for registration purposes into several different classes, such as, cosmetics, toys, or clothing. The PTO fee for federal trademark registration is currently (fiscal year 1999) \$245 per class of goods and services. 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 \$300. 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:

NC Department of the Secretary of State
Trademark Division
300 N Salisbury ST
Raleigh, NC 27703-5909
919/733-4129

The Secretary of State's office has an extensive website, URL:

<http://www.state.nc.us/secstate/trademrk/tmforms.htm>, that includes an on-line application for trademark registration.

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

1. A written application form – The USPTO encourages applicants to complete the application form on their website, print that completed form, and mail in the printed copy. There is also the option to download the form, print it, and then complete it. Soon they hope to have the application process completely on-line. The website, <http://www.uspto.gov/>, contains extensive, helpful trademark information.
2. Three examples showing actual use of the mark on or in connection with the goods or services
3. The appropriate filing fee (available on website)

For more information on federal trademark registration, contact:

US Patent and Trademark Office
US Department of Commerce
Washington, DC 20231
800/786-9199

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. Your attorney can help steer you away from words and symbols that may be difficult to protect and can provide advice on how to choose a word that has the potential for developing into a strong trademark. This attorney would also know which words and symbols could not be registered as trademarks.

Once the application is filed, qualified personnel will determine whether your mark is confusingly similar to another mark, even if the other marks are not being used. Keep in mind that once granted, your trademark registration can be canceled at any time if it is either not used properly or if it is discovered that the mark is in use by someone else.

For more information on state trademark registration, contact:

N.C. Department of the Secretary of State
Trademark Division
300 N. Salisbury St.,
Raleigh, NC 27703-5909
(919) 733-4129
URL: <http://www.state.nc.us/secstate/>

For more information on federal trademark registration, contact:

U.S. Patent and Trademark Office
U.S. Dept of Commerce
Washington, DC 20231
(800) 786-9199
URL: <http://www.uspto.gov/>

Copyright protection

A *copyright* is a form of protection provided exclusively by Federal laws for literary, dramatic, musical, artistic, and other intellectual works. It protects an idea's "expression" or appearance, but not the subject matter of 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 house. In other words, 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. While a programmer can use a copyright to prevent others from copying the code, the copyright cannot prevent others from developing code that performs similar functions. Additionally, copyright protection is not extended to basic facts, statistics, or concepts.

The essence of copyright is originality, which implies that the copyright owner or claimant originated the work. Originality does not mean novelty; it only means that the copyright claimant did not copy from someone else.

The owner of a copyrighted work, has the exclusive right to do and authorize any one of the following:

- 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 customary copyright notice for written, visual, and video works includes © (or the word "copyright" or "copr."), the year of first publication, and the name of the owner of the copyright. An example would be: © 1996 Jane Doe. A "P" enclosed in a circle is used for audio works. While this copyright notice is no longer a legal requirement, it is highly recommended because it informs the public that the work is protected by copyright. If in the event your work is infringed, the defendant cannot claim "innocent infringement" if your work carries the proper copyright notice.

Copyright ownership

Under the Copyright Act, as soon as a copyrightable work 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 "works made for hire" category 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. Therefore, the employer would also be the copyright owner.

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 endurance

In general, a copyright lasts the length of the author's life, plus an additional 50 years after the author's death. If there are two or more authors of the work, the copyright extends 50 years after the death of the last surviving author. For works made for hire, the copyright lasts seventy-five years from publication or 100 years from creation, whichever is shorter.

Obtaining copyright protection

The law provides that as soon as a copyright work is created, copyright is granted to the author. To secure this protection, use a copyright notice on the work. While there is no requirement that you do so, you can make a formal application with the Library of Congress. Their website at URL:

<http://lcweb.loc.gov/copyright/> has extensive information on copyrights and the application process. You can also download a registration form from the site. You will receive a certificate of copyright registration by submitting the following materials to the Library of Congress Copyright Office:

1. One copy of the work, if the work is unpublished, or two copies if it is published (they are non-returnable)
2. A completed registration form
3. Application fee (\$20 through June 1999; check website for updates)

By registering your copyright with the federal government, your right to protect your creation from infringement with the federal court is strengthened. This registration is fairly easy and uncomplicated and can therefore be performed 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.

Depending on the number of applications the Copyright Office is currently receiving, it may take 3-4 months before you receive a letter or certificate of registration. However, 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:

Library of Congress
Copyright Office
101 Independence Ave. SE
Washington, DC 20559-6000
General information: 202/707-3000
Copyright forms hotline: 202/707-9100
Hours: 8:30-5:00, M-F (excluding federal holidays)
URL: <http://lcweb.loc.gov/copyright/>

For copyright registration of websites, URL: <http://copyrightarchive.com/index.htm/>.

Appendices

A. Vocabulary List

Throughout the text of this booklet are certain words that you should know. The first time the word is listed in the text, 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	7	patent agent	9
business plan	25	patent attorney	9
claim	4	plant patent	4
confidential disclosure agreement	11	prior art	4
continuation-in-part	17	prototype	15
continuing application	17	royalty	21
copyright	38	service mark	35
design patent	4	specification	4
foreign filing license	17	trade name	35
intellectual property	3	trade secret	19
license	21	trademark	35
notice of allowance	17	utility patent	4
patent search	8	venture capital	28

B. Most Often-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 under consideration by the Patent and Trademark Office. Even then, the terms “Patent Pending” and “Patent Applied For” afford no 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 will 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. However, having a working model helps because it gives you a stronger claim to the idea if you have it reduced to practice before someone else.

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 the assignee who will then have 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 used.

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 often, it is recommended that a patent attorney or agent be used in order to have the best protection on 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 a device. However, if you build the improvement and market it in conjunction with the original device, you would infringe the original patent.

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.

When does an employer own the copyright?

If a work is created within the scope of an employee’s duties, 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?

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 between your product and another company's product, you can be sued for trademark infringement.

C. Helpful Contacts

Patent, Trademarks, & Copyrights Information

U.S. Patent and Trademark Office U.S. Dept of Commerce Washington, DC 20231 703/557-4636 1-800-786-9199 Depository Library 703/308-9000 www.uspto.gov	U.S. Copyright Public Information Office Library of Congress Madison Building, Room 401 101 Independence Ave., S.E. Washington, DC 20559 General Information: 202/707-3000 Copyright forms hotline: 202/707-9100 Lcweb.loc.gov/copyright
N.C. Science & Tech. Research Center (Trademark info only) 919/549-0771	DH Hill Library U.S. Documents Department NCSU 919/515-3280 www.lib.ncsu.edu/libraries/risd/govdocs
Trademark Assistance Center 703/308--9000	N.C. Dept of the Secretary of State (Trademark info only) 919/733-4129 www.state.nc.us/secstate

Patent and Trademarks Enforcement Assistance

U.S. International Trade Commission Washington, DC 20436 202/482-2000 www.usitc.gov	U.S. Customs Service Dept. of the Treasury 511 NW Broadway Portland, OR 97209 503/326-2871
--	--

Electrical and Safety Consumer Testing Agencies

Underwriters Laboratories Melville, NY 516/271-6200 Purpose: To obtain UL listing for electrical products	Canadian Standards Association 178 Rexdale Blvd. Rexdale (Toronto) Ontario, Canada M9W 1R3 416/747-4000 Purpose: If marketing in Canada is desired
Association of German Electrical Engineers (VDE) UL, Inc. 12 Laboratory Drive, P.O. Box 13995 RTP, NC 27709 919/549-1545	Association of Independent Scientific, Engineering, and Testing Firms (ACIL) 1629 K Street, NW, Suite 400 Washington, DC 20006 202/887-5872 Purpose: Operational and safety testing

Legal Referrals & Assistance

North Carolina Bar Association 919/677-0561	N.C. Lawyers Referral Service 800/662-7407
North Carolina State Bar 919/828-4620	

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

Bi-monthly publication with on-line version: www.inventorsdigest.com

Entrepreneurship & Small Business

Edge On-line

Small business articles: www.edgeonline.com/

Note: The “Business Toolbox” section has interactive modules to aid market planning, financial management, personnel development, and other business activities.

Entrepreneur

weekly magazine with website: www.entrepreneurmag.com/

note: has a “Bright Ideas” column on inventing

Internet Business Newsletter

weekly e-zine: adfree.com/IBNLINFO.htm

note: free business links for advertising and education

The Small Business Journal

www.tsbj.com/

Success Magazine

Monthly magazine with website: www.successmagazine.com/index.html

note: focuses personal and organizational effectiveness

Trade Secrets

e-zine: www.gracefield.com/gg/news-nl.htm

note: tips to start and grow your business successfully

Business & Economics News

Financial Times

www.usa.ft.com

Inc

www.inc.com

Investors Business Daily

www.investors.com

Charlotte Business Journal

Newspaper with website: www.amcity.com/charlotte/

Triangle Business Journal

Weekly newspaper with website: <http://www.amcity.com/triangle/>

note: important source for regional business news, particularly in the Raleigh-Durham area

Wall Street Journal

Newspaper with website: wsj.com

Marketing

Advertising Age

Weekly magazine with website: www.adage.com/

Adweek

Weekly magazine with website: www.adweek.com/

American Demographics

Marketing research website: www.marketingtools.com

Note: allows for full text searches of American Demographics articles; contains a directory of marketing services and a catalog of data sources, marketing books, and research materials

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 Street Journal, and other publications. Most often the full text of an article you find in the database is available and can 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)

See listing of offices at URL: <http://www.sbtdc.org/>

<i>Capital Opportunities for Small Businesses</i>	\$
<i>Business Start-up Kit and Resource Guide</i>	free

US Department of Commerce's Patent and Trademark Office

The following are available free on-line or in booklet form. See www1.uspto.gov or call 703/308-4257 for information about ordering.

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

The Small Business Administration (SBA), Charlotte

Call 704/344-6563 for information or see their website: www.sba.gov/regions/states/nc

Ideas Into Dollars
Avoiding Patent, Trademark, and Copyright Problems
Trademarks and Business Goodwill

Licensing Executive Society

Call 703/836-3106 for information or see their website: www.usa-canada.les.org/index.html

The Basics of Licensing

U. S. Copyright Office

Call 202/707-9100 or see their website: lcweb.loc.gov/copyright

Copyright Basics
Publications on Copyrights

American Bar Association

These publications are not free but not expensive. Call the Publications Department at 312/988-5000 or see their website: www.abanet.org

Marketing Your Invention

What Is a Patent?

What Is a Copyright?

Submitting an Idea to a Manufacturer

Software Licensing Contracts

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. Betterway 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	Address
U.S. Patent and Trademark Office (US PTO)	Patent-search resources; explanation of patent and trademark application process; application forms; PTO bulletin	http://www.uspto.gov/
U.S. PTO's Independent Inventor Resources Site	The Independent Inventor site is dedicated to serving the special needs and interests of the independent inventor and entrepreneur	http://www.uspto.gov/web/offices/com/iip/index.htm
US Copyright Office, Library of Congress	Copyright application process; application forms	http://lcweb.loc.gov/copyright/
Patent Portal – Richard S. Gruener, Villanova	Patent-search resources	http://www.law.vill.edu/~rgruner/patport.htm/
University of Washington Engineering Library	Patent-search resources	http://www.lib.washington.edu/engineering/
Intellectual Property Network	Patent-search database (patent descriptions and images)	http://www.patents.ibm.com/
SPO	Free access to patents listed since 1972; offers for commercial services	http://www.spo.eds.com/patents.html/
Andy Gibbs' Inventor's Resource	Patent, trademark, and industry search resources,; general IP and inventor information	http://www.gibbsgroup.com/
SBDC Research Network	Links to other patent information sites	http://www.smallbiz.sunycentral.edu/entre.htm/
Micropatent	Patent and trademark information	http://www.crcpress.com/
Franklin Pierce Law Center	Patent information	http://www.fplc.edu/IPMALL/
Kuester	Patent information	http://www.kuesterlaw.com/
Aimnet	Patent information	http://www.aimnet.com/~carroll/copyright/faq-home.html/
Templeton	Patent information	http://www.templetons.com/brad//copymyths.html/
European Patent Office	European-focused patent information; links to other internet resources for patent information	http://www.european-patent-office.org/online/index.htm/
Community of Science	US patent database updated weekly; information on research and development	http://patents.cos.com/
NC SBTDC	Information about services; links to state and federal sites	http://www.sbtdc.org/

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

NC Patent Attorneys and Agents who are registered to practice before the PTO

For up-to-date regional listings see also: <http://www.uspto.gov/go/attorney/region/>, 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; P. O. Box 371954; Pittsburgh, PA 15250-7954. For information or to order by phone call 202/512-1800.

Apex

SPEAKS, ELISE P.
102 BARNES SPRING CT.
APEX, NORTH CAROLINA 27502
919-303-5277
43147
Agent

STEPHENS, GREGORY
301 EDMORE AVENUE
APEX, NORTH CAROLINA 27502
919-468-2379
41329
Attorney

ZIMMERMAN, SCOTT P.
210 SNOW CAMP DR.
APEX, NORTH CAROLINA 27502
919-387-1968
41390
Agent

Asheville

CARTER, DAVID M.
CARTER & SCHNEDLER
P.O. BOX 2985
ASHEVILLE, NORTH CAROLINA 28802
704-252-6225
26407
Attorney

HABEL, ROBERT W.
102 BIG SPRING DRIVE
ASHEVILLE, NORTH CAROLINA 28804
704-251-9540
20674
Attorney

HARANG, BRUCE E.
P.O. BOX 19161

ASHEVILLE, NORTH CAROLINA 28815
828-275-2954
29720
Attorney

SCHNEDLER, STEVEN C.
CARTER & SCHNEDLER, P.A.
56 CENTRAL AVE., STE. 103
P.O. BOX 2985
ASHEVILLE, NORTH CAROLINA 28802
704-252-6225
27591
Attorney

SMITH, MICHAEL E.
121 LOOKOUT DRIVE
ASHEVILLE, NORTH CAROLINA 28804
33792
Attorney

YOUNG, FRANCIS W.
175 ROBINHOOD ROAD
ASHEVILLE, NORTH CAROLINA 28804
704-258-8568
18350
Attorney

Beaufort

PARK, CHARLES B., III
112 MOORE STREET
BEAUFORT, NORTH CAROLINA 28516
252-728-6905
19232
Attorney

Burlington

HILLIARD, STEVEN R.
CENTECH INC.
1400 N. CHURCH ST.
BURLINGTON, NORTH CAROLINA 27215
910-570-6250
38489
Agent

Cary

ALLEN, REYNOLD S.
824 CHIP CIRCLE
CARY, NORTH CAROLINA 27513
919-461-9718
34114
Attorney

BUIE, W. GRAHAM, IV
LORD CORPORATION
405 GREGSON DRIVE

CARY, NORTH CAROLINA 27511
919-469-3443
33479
Attorney

DAVIS, RANDALL A.
S A S INSTITUTE INC.
SAS COUPUS DRIVE
CARY, NORTH CAROLINA 27513
919-677-8000
31946
Attorney

EBERHARDT, WAYNE R.
107 GREY BRIDGE ROW
CARY, NORTH CAROLINA 27513
919-469-0349
22804
Attorney

GARDNER, PAUL LAWRENCE
LORD CORPORATION
POST OFFICE BOX 8012
CARY, NORTH CAROLINA 27612
919-468-5979
22372
Attorney

MAGRI, KAREN A.
MYERS BIGEL SIBLEY & SAJOVEC, P. A.
111 CORNING ROAD, SUITE 250
CARY, NORTH CAROLINA 27511
919-854-1400
41965
Attorney

PHILLIPS, MICHAEL C.
309 TRIMBLE AVENUE
CARY, NORTH CAROLINA 27511
919-380-9500
42072
Attorney

REID, SCOTT WARNER
MOORE AND VAN ALLEN, P.L.L.C.
101 LE BLANC COURT
CARY, NORTH CAROLINA 27513
919-286-8079
42098
Attorney

RUPERT, WAYNE W.
LORD CORPORATION
CROSSROADS CORPORATE PARK
BLDG. I I
110 CORNING ROAD, STE. 100
CARY, NORTH CAROLINA 27511
919-851-6544 X6204

34420
Attorney

WAYLAND, RANDALL S.
LORD CORPORATION
111 LORD DRIVE
P.O. BOX 8012
CARY, NORTH CAROLINA 27612
919-468-5979
36303
Attorney

WRIGHT, JAMES W.
LORD CORP.
111 LORD DRIVE
CARY, NORTH CAROLINA 27511
919-460-9648
24966
Attorney

Chapel Hill

ADAMS, CHARLES E.
105 CATAWBA COURT
CHAPEL HILL, NORTH CAROLINA 27514
33152
Attorney

CARROLL, CHARLOTTE A.
UNIV. OF NORTH CAROLINA
AT CHAPEL HILL, DEPT. OF CHEM
C B #3290 VENABLE HALL
CHAPEL HILL, NORTH CAROLINA 27599
919-966-4141
44065
Agent

DENISON, JO ANNE M.
DENISON & ASSOCS., P.C.
102 ELLSWORTH PLACE
CHAPEL HILL, NORTH CAROLINA 27516
1-888-LAWPATS
34150
Attorney

FRAZIER, JAMES M.
2506-2 HWY. 54-WEST
CHAPEL HILL, NORTH CAROLINA 27516
919-969-8509
43617
Agent

FREEDMAN, IRVING M.
33 WEDGEWOOD ROAD
CHAPEL HILL, NORTH CAROLINA 27514
919-967-6463
18989
Attorney

GLASGOW, JINAN
106 TIMBER HOLLOW CT., #353
CHAPEL HILL, NORTH CAROLINA 27514
919-942-6538
42585
Agent

GREEN, EDWARD H., III
INTELLECTUAL PROPERTY/TECHNOLOGY LAW
6320 QUADRANGLE DR., STE 110
CHAPEL HILL, NORTH CAROLINA 27514
919-419-9350
42604
Agent

KRUTER, JEROME L.
322 SUNSET CREEK CIRCLE
CHAPEL HILL, NORTH CAROLINA 27516
39557
Agent

NIELSEN, LAWRENCE A.
416 RIDGECREST DRIVE
CHAPEL HILL, NORTH CAROLINA 27514
919-967-3572
29682
Agent

PRIEST, PETER H.
529 DOGWOOD DRIVE
CHAPEL HILL, NORTH CAROLINA 27516
919-942-1434
30210
Attorney

VALLA, SAMUEL M.
109 ANGLESE COURT
CHAPEL HILL, NORTH CAROLINA 27516
919-967-9740
43966
Agent

Charlotte

ADAMS, W. THAD, III
2180 FIRST UNION PLAZA
CHARLOTTE, NORTH CAROLINA 28282
704-375-9249
29037
Attorney

ADDITON, RICHARD L.
PHILIP SUMMA
13777 BALLANTYNE CORPORATE PL.
SUITE 315
CHARLOTTE, NORTH CAROLINA 28277
704-945-6700

43460
Attorney

ALLAN, ALBERT P.
ALSTON & BIRD, L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
40485
Attorney

ARROYO, BLAS P.
ALSTON & BIRD L.L.P.
P.O. DRAWER 34009
1211 EAST MOREHEAD STREET
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
31319
Attorney

ATKINSON, WILLIAM M.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
33070
Attorney

BAKER, STANLEY B.
13777 BALLANTYNE CORPORATE PLACE
SUITE 315
CHARLOTTE, NORTH CAROLINA 28277
704-945-6700
35058
Attorney

BARNHARDT, JOHN J., III
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
POST OFFICE DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
28686
Attorney

BAUERMEISTER, HERMAN O.
7413 TRUELIGHT CH. ROAD
CHARLOTTE, NORTH CAROLINA 28227
704-545-4645
15856
Attorney

BELL, PAUL B.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234

704-331-6000
16472
Attorney

BINDSEIL, JAMES J.
KILPATRICK STOCKTON L. L. P.
3500 ONE FIRST UNION CENTER
301 SOUTH COLLEGE STREET
CHARLOTTE, NORTH CAROLINA 28202
704-338-5090
42326
Attorney

BODENHEIMER, STEPHEN M., JR.
ALSTON & BIRD L.L.P.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
28932
Attorney

CALDWELL, BARBARA K.
SHEFTE, PINCKNEY & SAWYER
3740 ONE FIRST UNION CENTER
3015 COLLEGE ST.
CHARLOTTE, NORTH CAROLINA 28202
704-375-9181
33364
Attorney

CARNES, JULIAN E., JR.
BELL, SELTZER & PARK
& GIBSON
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-377-1561
17641
Attorney

CLEMENTS, GREGORY N.
HOECHST CELANESE CORP.
P.O. BOX 32414
CHARLOTTE, NORTH CAROLINA 28232
704-554-3530
30713
Attorney

CONNOR, MICHAEL S.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
34141
Attorney

COOPER, JASON P.
ALSTON & BIRD L.L.P.

1211 EAST MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
38114
Attorney

CURRENT, SARA M.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD ST.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
38057
Attorney

DEARTH, MILES B.
CLARIANT CORPORATION
INDUSTRIAL PROPERTY DEPARTMENT
4331 CHESAPEAKE DRIVE
CHARLOTTE, NORTH CAROLINA 28216
704-395-6702
35115
Attorney

DOUGHERTY, RALPH H.
1515 MOCKINGBIRD LANE
SUITE 410
CHARLOTTE, NORTH CAROLINA 28209
704-527-7734
25851
Attorney

DREMANN, CHRISTOPHER C.
1515 MOCKINGBIRD LANE
SUITE 820
CHARLOTTE, NORTH CAROLINA 28209
704-527-7734
36504
Attorney

ELDERKIN, CHARLES B.
ALSTON & BIRD LLP
P.O.DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
24357
Attorney

GARMON, JUDITH E.
2101 SARDIS ROAD NORTH, #126
CHARLOTTE, NORTH CAROLINA 28227
704-841-1600
28670
Attorney

GIBSON, FLOYD A.
ALSTON & BIRD L.L.P.

P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
19568
Attorney

GOOZNER, ROBERT E.
DRINKARD RESEARCH
BOX 5471
2226 N. DAVIDSON ST.
CHARLOTTE, NORTH CAROLINA 28205
704-332-8171
42593
Agent

GOSNELL, GUY RANDALL
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD ST.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
34610
Attorney

GRISWOLD, THOMAS H.
JOHN DEERE CONSUMER PRODUCTS INC.
14401 CAROWINDS BLVD.
P.O. BOX 7047
CHARLOTTE, NORTH CAROLINA 28241
704-588-3200
33178
Attorney

GUNDEL, NORMAN L.
8501 I B M DRIVE
M G 90 - Q P Z A
CHARLOTTE, NORTH CAROLINA 28262
704-594-8302
30387
Attorney

HAMMER, ROBERT H., III
GELGARD LLC
13800 SOUTH LAKES DRIVE
CHARLOTTE, NORTH CAROLINA 28273
704-587-8630
31764
Attorney

HANF, SCOTT E.
CLARIANT CORPORATION
INDUSTRIAL PROPERTY DEPARTMENT
4331 CHESAPEAKE DRIVE
CHARLOTTE, NORTH CAROLINA 28216
704-395-6712
38906
Attorney

HESSE, KARL O.
I B M CORP.
1001 W.T. HARRIS BLVD.
18A/204-3
CHARLOTTE, NORTH CAROLINA 28257
704-594-8300
25398
Attorney

HIGGINS, JOHN P.
ALSTON & BIRD, L.L.P.
1211 EAST MOREHEAD ST.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
40645
Attorney

HILL, DONALD M., JR.
ALSTON & BRID L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
40646
Attorney

HINSON, JAMES B.
2421 THORNBRIDGE RD.
CHARLOTTE, NORTH CAROLINA 28226
704-364-2728
25878
Attorney

HUFFSTETLER, RACHEL HEALEY
ALSTON & BIRD L.L.P.
1211 EAST MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
35038
Attorney

HUNT, CLIFTON TREDWAY, JR.
P.O. BOX 15039
CHARLOTTE, NORTH CAROLINA 28211
704-365-2844
17884
Attorney

JACKSON, SUSAN SERAD
CLARIANT CORPORATION
INDUSTRIAL PROPERTY DEPARTMENT
4331 CHESAPEAKE DRIVE
CHARLOTTE, NORTH CAROLINA 28216
704-395-6716
41302
Attorney

JONES, LARRY C.
ALSTON & BIRD L.L.P.
1211 EAST MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
30071
Attorney

KROBOTH, TIMOTHY R.
5501 PROVIDENCE COUNTRY CLUB DR.
CHARLOTTE, NORTH CAROLINA 28277
704-846-3105
28435
Attorney

LAYTON, SAMUEL GILLILAND, JR.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
22807
Attorney

LINDSAY, RONALD T.
COLLINS & AIKMAN CORPORATION
701 MC CULLOUGH DRIVE
CHARLOTTE, NORTH CAROLINA 28262
704-548-2037
30193
Attorney

LINKER, RAYMOND O., JR.
ALSTON & BIRD L.L.P.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
26419
Attorney

LIPSCOMB, ERNEST B., III
ALSTON & BIRD L.L.P.
1211 EAST MOREHEAD STREET
POST OFFICE DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
24733
Attorney

LUPO, DICKSON M.
ALSTON & BIRD L.L.P.
1211 EAST MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
34864

Attorney

MC CANN, PHILIP P.
CLARIANT CORPORATION
INDUSTRIAL PROPERTY DEPARTMENT
4331 CHESAPEAKE DRIVE
CHARLOTTE, NORTH CAROLINA 28216
704-395-6701
30919
Attorney

MC COY, MICHAEL D.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
28098
Attorney

MC DERMOTT, RICHARD M.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
40720
Attorney

MENKER, JAMES R.
DOUGHERTY & DREMAN
1515 MOCKINGBIRD LANE
SUITE 820
CHARLOTTE, NORTH CAROLINA 28209
704-527-7734
42881
Attorney

MEUNIER, ANDREW T.
BELL, SELZER, PARK
& GIBSON
1211 E. MOOREHEAD ST.
CHARLOTTE, NORTH CAROLINA 28204
704-331-6000
40726
Attorney

PANG, ANDREW Y.
8020 ANDOVER CREEK DR.
APT. 1209
CHARLOTTE, NORTH CAROLINA 28210
704-643-4109
40114
Agent

PEDIGO, PAUL F.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET

P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
31650
Attorney

PENDLETON, MELISSA B.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
35459
Attorney

PHILLIPS, DON HOUGHTON
4105 SHARON COMMONS LANE
CHARLOTTE, NORTH CAROLINA 28210
704-556-0164
20085
Attorney

PINCKNEY, FRANCIS M.
KENNEDY COVINGTON LOBDELL
& HICKMAN, L.L.P.
4200 NATIONS BANK CORPORATE CENTER
100 N. TRYON STREET
CHARLOTTE, NORTH CAROLINA 28202
704-331-5791
21138
Attorney

RANKIN, WILTON
200 HEMPSTEAD PL.
CHARLOTTE, NORTH CAROLINA 28207
704-334-5073
20330
Attorney

ROSE, BRUCE J.
ALSTON & BIRD L L P
1211 E. MOREHEAD STREET
P.O. BOX 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
37431
Attorney

RUEGSEGGER, MARTIN C.
PIEDMONT NATURAL GAS
COMPANY, INC.
1915 REXFORD ROAD
CHARLOTTE, NORTH CAROLINA 28211
704-364-3120
27945
Attorney

SAWYER, KARL S., JR.

KENNEDY COVINGTON LOBDELL
& HICKMAN, L.L.P.
4200 BANK OF AMERICA CORPORATE CTR.
100 N. TRYON STREET
CHARLOTTE, NORTH CAROLINA 28202
704-331-5792
28902
Attorney

SCHWARTZ, JEFFREY J.
W. THAD ADAMS, III P.A.
301 S. TRYON ST.
TWO FIRST UNION
SUITE 2180
CHARLOTTE, NORTH CAROLINA 28282
704-375-9249
37532
Attorney

SEAMAN, KENNETH A.
219 GLEN OAKS ROAD
CHARLOTTE, NORTH CAROLINA 28270
704-365-6363
28113
Attorney

SELTZER, DONALD MILLER
BELL, SELTZER, PARK
& GIBSON
P.O. DRAWER 34009
1211 E. MOREHEAD ST.
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
18018
Attorney

SHEFTE, DALBERT UHRIG
KENNEDY COVINGTON LOBDELL
& HICKMAN, L.L.P.
4200 NATIONSBANK CORPORATE CENTER
100 N. TRYON STREET
CHARLOTTE, NORTH CAROLINA 28202
704-331-5790
18174
Attorney

SIMPSON, J. MICHAEL
8514 PARK ROAD
CHARLOTTE, NORTH CAROLINA 28210
704-554-8300
31797
Attorney

SULLIVAN, JOHN L., JR.
ALSTON & BIRD L.L.P.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000

29593
Attorney

SUMMA, PHILIP
13777 BALLANTYNE CORPORATE PLACE
SUITE 315
CHARLOTTE, NORTH CAROLINA 28277
704-945-6700
31573
Attorney

TAULBEE, GEORGE M.
ALSTON & BIRD L.L.P.
1211 E. MOREHEAD STREET
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
35704
Attorney

TENNENT, ANDREW P.
I B M CORPORATION
8501 I B M DRIVE
Q P Z A / M.D. 90
CHARLOTTE, NORTH CAROLINA 28262
704-594-8305
35807
Attorney

THOMAS, TRICIA A.
LAW OFFICES OF CLIFTON
TED HUNT
P.O. BOX 4189
CHARLOTTE, NORTH CAROLINA 28226
704-365-2844
42489
Agent

TILLMAN, CHAD D.
KENNEDY COVINGTON LOBDELL
& HICKMAN LLP
4200 NATIONS BANK CORPORATE CENTER
100 N. TRYON STREET
CHARLOTTE, NORTH CAROLINA 28202
704-331-5795
38634
Attorney

TOBIN, MICHAEL A.
KENNEDY, COVINGTON, LOBDELL
& HICKMAN, L.L.P.
SUITE 4200, NATIONSBANK CORP. CENTER
100 NORTH TRYON ST.
CHARLOTTE, NORTH CAROLINA 28202
(704)331-7400
43956
Attorney

TODD, JACK D.
KENNEDY COVINGTON LOBDELL
& HICKMAN, L.L.P.
100 N. TRYON STREET, STE. 4200
BANK OF AMERICA CORPORATE CENTER
CHARLOTTE, NORTH CAROLINA 28202
704-331-7404
44375
Attorney

WARD, HENRY B.
ALSTON & BIRD L L P
1211 E. MOREHEAD ST.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
42212
Attorney

WASLEFF, JOHN A.
ALSTON & BIRD, L L P
P.O. BOX 34009S.W.
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
36047
Attorney, government employee

WHITTAKER, MALCOLM E.
MINEO & WHITTAKER
P.O. BOX 10615
CHARLOTTE, NORTH CAROLINA 28212
704-571-4022
37965
Attorney

WITHERSPOON, JAMES A.
ALSTON & BIRD, L.L.P.
P.O. DRAWER 34009
CHARLOTTE, NORTH CAROLINA 28234
704-331-6000
36723
Attorney

WOOD, NANCY TALAVERA
KENNEDY COVINGTON LOBDELL
& HICKMAN, L.L.P.
4200 NATIONSBANK CORPORATE CENTER
100 N. TRYON STREET
CHARLOTTE, NORTH CAROLINA 28202
704-331-7483
38334
Attorney

ZHANG, JAY Z.
ALSTON & BIRD L L P
1211 E. MOREHEAD ST.
CHARLOTTE, NORTH CAROLINA 28277
(704)331-6000

44003
Attorney

Clemmons

BURDEN, WILLIAM S.
6734 AMBERLEY LANE
CLEMMONS, NORTH CAROLINA 27012
919-766-1405
25033
Agent

Concord

AUBER, ROBERT P.
1220 GREENSIDE DRIVE
CONCORD, NORTH CAROLINA 28027
704-782-8223
17343
Attorney

Corolla

RICHMAN, BARRY S.
868 WELK COURT
COROLLA, NORTH CAROLINA 27927
919-453-0626
40472
Agent

Durham

ANDERSON, KEVIN P.
5 SANDSTONE RIDGE DRIVE
DURHAM, NORTH CAROLINA 27713
919-401-2619
43471
Agent

BAUM, ALLEN R.
BURNS, DOANE, SWECKER
& MATHIS
1009 SLATER ROAD
SUITE 210
DURHAM, NORTH CAROLINA 27703
919-941-9240
36086
Attorney

BROWN, JAY M.
THE ECLIPSE GROUP
5003 SOUTHPARK DRIVE, SUITE 260
DURHAM NC 27713
Voice 919-313-6161
Fax 919-313-6170
jmb@eclipsegrp.com
www.eclipsegrp.com
Patent Attorney

CHIANTERA, DOMINIC J.
MOORE & VAN ALLEN, P L L C
2200 WEST MAIN STREET
SUITE 800
DURHAM, NORTH CAROLINA 27705
919-286-8169
27776
Attorney

COCKS, FRANKLIN H.
DUKE UNIV.
DEPT. OF MECH. ENG.
RESEARCH DRIVE
DURHAM, NORTH CAROLINA 27706
30041
Agent

ERRICO, JOSEPH P.
4600 UNIVERSITY DR.
APT. 1213
DURHAM, NORTH CAROLINA 27707
919-419-0547
38131
Attorney

FLYNN, KEVIN E.
THE ECLIPSE GROUP
5003 SOUTHPARK DRIVE, SUITE 260
DURHAM NC 27713
Voice 919-313-6162
Fax 919-313-6170
kef@eclipsegrp.com
www.eclipsegrp.com
Patent attorney

GEORGE, SAMUEL E.
DUKE UNIVERSITY MEDICAL CENTER
BOX 3060
DURHAM, NORTH CAROLINA 27710
919-681-8446
44119
Agent

GERHART, DONALD J.
CATO RESEARCH LTD.
4346 SOUTH ALSTON AVENUE
DURHAM, NORTH CAROLINA 27713
919-361-2286
42572
Agent

GLOEKLER, DAVID P.
THE ECLIPSE GROUP
5003 SOUTHPARK DRIVE, SUITE 260
DURHAM NC 27713
Voice 919-313-6163

Fax 919-313-6170
dpg@eclipsegrp.com
www.eclipsegrp.com
Patent attorney

GRAY, TARA J.
OLIVE & OLIVE, P.A.
500 MEMORIAL DRIVE
P.O. BOX 2049
DURHAM, NORTH CAROLINA 27701
919-683-5514
35526
Attorney

GREEN, HANNAH O.
134 SOLTERRA WAY
DURHAM, NORTH CAROLINA 27705
919-493-2395
33240
Agent

HALL, DAVID CHARLES
CREE RESEARCH, INC.
4600 SILICON DRIVE
DURHAM, NORTH CAROLINA 27703
919--313-5343
38904
Attorney

HARLOW, DAVID A.
MOORE & VAN ALLEN
2200 WEST MAIN ST.
SUITE 800
DURHAM, NORTH CAROLINA 27705
919-286-8000
37146
Attorney

HUNT, GREGORY A.
JENKINS & WILSON, P.A.
SUITE 1400 UNIVERSITY TOWER
3100 TOWER BOULEVARD
DURHAM, NORTH CAROLINA 27707
919-493-8000
41085
Attorney

JENKINS, RICHARD E.
SUITE 1610 UNIVERSITY TOWER
3100 TOWER BLVD.
DURHAM, NORTH CAROLINA 27707
919-493-8000
28428
Attorney

JOHNSTON, MICHAEL G.
MOORE & VAN ALLEN, P.L.L.C.
2200 W. MAIN ST.

SUITE 800
DURHAM, NORTH CAROLINA 27705
919-286-8000
38194
Attorney

KELLOGG, LEIGH R.
5500-68D FORTUNES RIDGE DRIVE
DURHAM, NORTH CAROLINA 27713
919-419-0374
39725
Attorney

KERSEY, JAMES R.
173 MONTROSE DRIVE
DURHAM, NORTH CAROLINA 27707
919-489-7916
33719
Attorney

LAMAR, FREDERICK C.
LAW OFFICE OF FRED LAMAR
POST OFFICE BOX 2604
DURHAM, NORTH CAROLINA 27715
919-402-8902
41924
Attorney

LYN, KEVIN R.
4033 KELLY DRIVE
DURHAM, NORTH CAROLINA 27707
919-490-5916
42818
Attorney

MC CREA, VICTORIA HUNT
WOMBLE CARLYLE SANDRIDGE
& RICE
SUITE 300
2505 MERIDIAN PARKWAY
DURHAM, NORTH CAROLINA 27713
919-484-2300
41978
Attorney

OLIVE, B. B.
OLIVE & OLIVE
500 MEMORIAL STREET
P.O. BOX 2049
DURHAM, NORTH CAROLINA 27702
919-683-5514
18267
Attorney

PHILIPS, MICHAEL R.
OLIVE & OLIVE, P.A.
P.O. BOX 2049
DURHAM, NORTH CAROLINA 27702

919-683-5514
34407
Attorney

REISS, STEVEN M.
BELL & HOWELL MAIL PROCESSING
SYSTEMS COMPANY, INC.
3791 SOUTH ALSTON AVENUE
DURHAM, NORTH CAROLINA 27713
919-767-6643
37519
Attorney

SKORD, JENNIFER L.
LAW OFFICES OF RICHARD E. JENKINS
UNIVERSITY TOWER, SUITE 1600
3100 TOWER BLVD.
DURHAM, NORTH CAROLINA 27707
919-493-8000
30687
Attorney

SMITH, CHARLES E.
NORTH CAROLINA CENTRAL UNIV.
SCHOOL OF LAW
1512 SOUTH ALSTON AVE.
DURHAM, NORTH CAROLINA 27707
919-560-6348
26647
Attorney

SPRINGS, MICHAEL A.
OLIVE & OLIVE, P.A.
500 MEMORIAL STREET
P.O. BOX 2049
DURHAM, NORTH CAROLINA 27702
919-683-5514
41322
Attorney

TAYLOR, ARLES A., JR.
RICHARD E. JENKINS, P.A.
SUITE 1401 UNIVERSITY TOWER
3100 TOWER BLVD.
DURHAM, NORTH CAROLINA 27707
919-493-8000
39395
Attorney

VRANA, BRUCE
OLIVE & OLIVE, P.A.
500 MEMORIAL ST.
P.O. BOX 2049
DURHAM, NORTH CAROLINA 27702
919-683-5514
38672
Attorney

WILSON, JEFFREY LOUIS
SUITE 1401 UNIVERSITY TOWER
3100 TOWER BLVD.
DURHAM, NORTH CAROLINA 27707
919-493-8000
36058
Attorney

WOLGIN, NEAL B.
5 COPPER HILL COURT
DURHAM, NORTH CAROLINA 27713
919-493-0948
43283
Agent

ZEH, HERBERT J., JR.
REICHHOLD CHEMICALS, INC.
2400 ELLIS ROAD
DURHAM, NORTH CAROLINA 27703
919-990-7862
25416
Attorney

Enka

DELLERMAN, KAREN M.
BASF CORPORATION
SAND HILL ROAD
ENKA, NORTH CAROLINA 28728
704-667-7685
33592
Attorney

NAMMO, LAURA D.
B A S F CORPORATION
SAND HILL ROAD
ENKA, NORTH CAROLINA 28728
704-667-7760
42024
Attorney

Franklin

CORBIN, DAVID H.
1028 BATTLE BRANCH RD.
FRANKLIN, NORTH CAROLINA 28734
704-369-8758
39565
Agent

Fuquay-Varina

DOUBET, MARCIA L.
5228 WESTMINSTER LANE
FUQUAY-VARINA, NORTH CAROLINA 27526
919-557-3827
40999
Attorney

Greensboro

ANDIA, GILBERT J., JR.
RHODES & MASON, P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
38815
Attorney, government employee

ANTOLIN, STANISLAV
RHODES & MASON, P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
336-273-4422
34979
Attorney

BEATTY, DAVID D.
RHODES, COATS & BENNETT, L.L.P.
1600 FIRST UNION TOWER
GREENSBORO, NORTH CAROLINA 27401
910-273-4422
38071
Attorney

BEAVERS, WALTER L.
326 S. EUGENE STREET
GREENSBORO, NORTH CAROLINA 27401
919-275-7601
26704
Attorney

DAVENPORT, TAYLOR M.
PATENT LAW OFFICES OR WALTER L. BEAVERS
326 SOUTH EUGENE STREET
GREENSBORO, NORTH CAROLINA 27401
336-275-7601
42466
Attorney

DOSSE, WILLIAM GLENN
5307 MOCKINGBIRD ROAD
GREENSBORO, NORTH CAROLINA 27406
919-674-3743
21185
Attorney

FIX, AMY H.
RHODES & MASON, P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
336-273-4422
42616
Attorney

HALLMAN, CLINTON H., JR.
RHODES & MASON, P.L.L.C.

P.O. BOX 2974
GREENSBORO NORTH CAROLINA 27402
336-273-4422
38480
Attorney

HICKS, JACK B.
RHODES & MASON, P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
919-273-4422
34180
Attorney

KALISH, DAVID D.
RHODES, COATS & BENNETT, L.L.P.
1600 FIRST UNION TOWER
300 N. GREENE STREET
GREENSBORO, NORTH CAROLINA 27401
336-273-4422
42706
Attorney

LESTER, JAMES L.
RHODES & MASON, P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
910-273-4422
38721
Attorney

MACCORD, HOWARD A., JR.
RHODES & MASON, P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
919-273-4422
28639
Attorney

MAIER, JOHN B.
BURLINGTON INDS., INC.
P.O. BOX 21207
GREENSBORO, NORTH CAROLINA 27420
910-379-2134
20256
Attorney

NIRANJAN, FRANK R.
3104 N. LAWNSDALE DRIVE
GREENSBORO, NORTH CAROLINA 27408
336-286-3981
41572
Agent

PEABODY, JOHN D.
NOVARTIS CORPORATION
P.O. BOX 18300
GREENSBORO, NORTH CAROLINA 27419

336-632-7013
41440
Agent

PETERS, ROBERT YAEGER
A T & T
P. O. BOX 25000
I-85 & MT. HOPE CHURCH ROAD
ROOM G C 1-3A9
GREENSBORO, NORTH CAROLINA 27420
910-279-3090
19823
Attorney

RHODES, CHARLES R.
RHODES & MASON,P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
919-273-4422
24200
Attorney

RILEE, EDWARD W., JR.
RHODES & MASON, P.L.L.C.
P.O. BOX 2974
GREENSBORO, NORTH CAROLINA 27402
910-273-4422
31869
Attorney

TEOLI, WILLIAM A., JR.
NOVARTIS CORPORATION
P.O. BOX 18300
GREENSBORO, NORTH CAROLINA 27419
336-632-7706
33104
Attorney

TERRANOVA, STEVEN N.
GENERAL PATENT COUNSEL & ASSISTANT
GENERAL COUNSEL
GILBARCO INC
7300 W FRIENDLY AVENUE P.O.BOX 22087
GREENSBORO, NORTH CAROLINA 27410
336-547-5257
43185
Agent

WITHROW, BENJAMIN S.
RHODES, COATS & BENNETT, L.L.P.
1600 FIRST UNION TOWER
GREENSBORO, NORTH CAROLINA 27401
910-273-4422
40876
Attorney

Hendersonville

GUY, JOSEPH T., JR.
20 WESTBRIDGE DR.
HENDERSONVILLE, NORTH CAROLINA 28739
704-693-1438
35172
Agent

LEPPINK, JAMES A.
5 TAMARAC TERRACE
HENDERSONVILLE, NORTH CAROLINA 28739
704-891-2127
33077
Attorney

MILLER, ROBERT P.
112 RADCLIFF CT.
HENDERSONVILLE, NORTH CAROLINA 28739
704-693-0386
16750
Attorney

STEIN, WILLIAM J.
106 KENWOOD DRIVE
HENDERSONVILLE, NORTH CAROLINA 28739
704-693-0666
25442
Attorney

TROIDL, FRANK SAMUEL
2012 HOLLY TREE HILL
HENDERSONVILLE, NORTH CAROLINA 28739
704-696-3194
17752
Attorney

Hickory

ABERLE, TIMOTHY J.
SIECOR OPERATIONS, LLC
P.O. BOX 489
HICKORY, NORTH CAROLINA 20231
36383
Attorney

ABERNETHY, J. DAVID
3110 5TH ST PL N W
HICKORY, NORTH CAROLINA 28601
704-323-8349
32186
Attorney

LEETZOW, MICHAEL L.
PATENT COUNSEL
SIECOR CORPORATION
489 SIECOR PARK
P.O. BOX 489
HICKORY, NORTH CAROLINA 28603-0489
828-327-5319

35932
Attorney

MOFFITT, ROY BRATTON
SIECOR CORP.
489 SIECOR PARK
HICKORY, NORTH CAROLINA 28603
704-327-5131
24692
Attorney

TAYLOR, KENNETH M., JR.
SIECOR CORP.
800 17TH STREET, N.W.
HICKORY, NORTH CAROLINA 28601
704-327-5205
30379
Attorney

TEALL, ROBERT R.
HICKORY SPRINGS MFG. COMPANY
235 SECOND AVENUE N.W.
HICKORY, NORTH CAROLINA 28601
704-328-2201
26345
Attorney

WYATT, FRANK BURKHEAD, II
COMMSCOPE, INC.
1375 LENOIR-RHYNE BLVD.
HICKORY, NORTH CAROLINA 28601
704-324-2200
34283
Attorney

High Point

BENNETT, HUGH C., JR.
P.O. BOX 660
HIGH POINT, NORTH CAROLINA 27261
919-883-2111
25664
Attorney

Kitty Hawk

SMALLWOOD, GERALD E.
P.O. BOX 1131
KITTY HAWK, NORTH CAROLINA 27949
919-261-1991
20967
Attorney

Lourinburg

MAC KAY, RAYMOND F.
1014 SCOTIA VILLAGE
LOURINBURG, NORTH CAROLINA 28352

16159
Agent

Manteo

ROSS, J. BOWEN, JR.
P.O. BOX 57
MANTEO, NORTH CAROLINA 27954
919-473-6365
22405
Attorney

Matthews

COFFMAN, E. RONALD
3617 BOUNTY COURT
MATTHEWS, NORTH CAROLINA 28105
704-844-6742
20642
Attorney

TOLLY, LORI D.
217 FOXFIELD LANE
MATTHEWS, NORTH CAROLINA 28105
704-841-3676
31199
Agent

Midway Park

PETERS, MICHELLE
2010 HUNTERS RIDGE DR.
MIDWAY PARK, NORTH CAROLINA 28544
31866
Attorney

Mount Airy

HAXTON, MANFORD R.
2893 WEST PINE STREET
MOUNT AIRY, NORTH CAROLINA 27030
919-789-5034
20073
Attorney

Morrisville

BEGUN, ARTHUR D.
104 ABERSON COURT
MORRISVILLE, NORTH CAROLINA 27560
919-319-0033
31811
Attorney

GIGLIOTTI, THOMAS A.
NORTEL NETWORKS
4307 EMPEROR BOULEVARD
M.S. 11A130

MORRISVILLE, NORTH CAROLINA 27560
919-992-4007
37579
Attorney

JENSEN, ERIC P.
NORTHERN TELECOM
4400 EMPEROR BLVD.
MAILSTOP 11A130
MORRISVILLE, NORTH CAROLINA 27560
919-992-1350
37647
Attorney

New Bern

BERGER, ROBERT L.
507 SHINNECOCK COURT
NEW BERN, NORTH CAROLINA 28562
919-637-2759
19303
Attorney

Ocean Isle Beach

EDGERTON, WILLIAM H.
1660 COLONIST SQ., S.W.
OCEAN ISLE BEACH, NORTH CAROLINA 28469
919-754-5940
18864
Agent

Pisgah Forest

HOOPER, ALVIN D.
55 SWEETWATER LANE
PISGAH FOREST, NORTH CAROLINA 28768
704-883-8277
25731
Attorney

Pittsboro

ENLOW, PAUL M.
149 FERRINGTON POST
PITTSBORO, NORTH CAROLINA 27312
919-542-3666
17461
Attorney

LICHIELLO, JAMES J.
681 FEARRINGTON POST
PITTSBORO, NORTH CAROLINA 27312
919-542-3803
18203
Attorney

Raleigh

AYERS, D. RANDAL
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
40493
Attorney

BARBER, LYNN E.
1507 CHEROKEE DRIVE
P.O. BOX 6450
RALEIGH, NORTH CAROLINA 27628
919-833-8150
31734
Attorney

BENNETT, DAVID E.
RHODES, COATS & BENNETT
909 GLENWOOD AVENUE
RALEIGH, NORTH CAROLINA 27605
919-832-3946
32194
Attorney

BENNETT, VIRGINIA C.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
37092
Attorney

BIGEL, MITCHELL S.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
29614
Attorney

BISWAS, SOROJINI J.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
39111
Attorney

BODDIE, NEEDHAM J., II
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428

RALEIGH, NORTH CAROLINA 27627
919-854-1400
40519
Attorney

BROWN, ANNE
ALSTON & BIRD, L.L.P.
3605 GLENWOOD AVENUE
SUITE 310
RALEIGH, NORTH CAROLINA 27622
919-420-2200
36463
Attorney

BURGARD, KRISTINA L.
129 STAGECREST DR.
RALEIGH, NORTH CAROLINA 27603
919-779-8888
38398
Attorney

CANNON, JAMES R.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
35839
Attorney

CARR, FREDDIE K.
PROGRESSIVE INTERNATIONAL
ELECTRONICS
2422 ATLANTIC AVE.
RALEIGH, NORTH CAROLINA 27604
919-821-1323
29624
Agent

COATS, LARRY L.
RHODES, COATS & BENNETT
909 GLENWOOD AVENUE
RALEIGH, NORTH CAROLINA 27605
919-832-3946
25620
Attorney

CORNELL, RONALD S.
4901 CREMSHAW COURT
RALEIGH, NORTH CAROLINA 27614
919-845-9656
20230
Attorney

CORTINA, ANIBAL JOSE
KILPATRICK STOCKTON L L P
SUITE 400
4101 LAKE BOONE TRAIL

RALEIGH NORTH CAROLINA 27607-2519
919-420-1820
29733
Attorney

EVANS, CHARLES L.
INTERFACE TECHNOLOGIES, INC.
3120 POPLARWOOD COURT
SUITE 104
RALEIGH, NORTH CAROLINA 27604
919-876-1566 X133
40380
Attorney

FAUST, RICHARD S.
8384 SIX FORKS ROAD
SUITE 204
RALEIGH, NORTH CAROLINA 27615
919-846-4900
27544
Attorney

FLYNN, JOHN D.
11933 STRAIGHT-A-WAY LANE
RALEIGH, NORTH CAROLINA 27613
919-870-8396
35137
Attorney

FRISONE, JOHN B.
8828 WOODY HILL ROAD
RALEIGH, NORTH CAROLINA 27613
919-848-6834
18909
Attorney

FUSCOE, JOHN M.
WYRICK ROBBINS YATES & PONTON L. L. P.
4101 LAKE BOONE TRAIL, SUITE 300
RALEIGH, NORTH CAROLINA 27607
919-781-4000
41766
Attorney

GALVIN, THOMAS F.
1609 WEDGELAND DRIVE
RALEIGH, NORTH CAROLINA 27615
25394
Attorney

GLATZ, ROBERT W.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
36811
Attorney

GRANT, MARY B.
9108 TEALBY PLACE
RALEIGH, NORTH CAROLINA 27615
919-676-4941
32176
Attorney

HARPER, THEODORE R.
PETREE STOCKTON, L.L.P.
4101 LAKE BOONE TRAIL
SUITE 400
RALEIGH, NORTH CAROLINA 27622
919-420-1704
35890
Attorney

HARRINGTON, RICHARD C.
HYBRIZYME CORPORATION
2801 BLUE RIDGE ROAD
SUITE G-70
RALEIGH, NORTH CAROLINA 27607
919-783-9595
36376
Attorney

HATFIELD, SCOTT C.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
38176
Attorney

HEARD, JOSEPH H.
BELL, SELTZER, PARK & GIBSON
3605 GLENWOOD AVE., STE. 310
RALEIGH, NORTH CAROLINA 27612
919-881-3140
19379
Attorney

HERRON, JOHN W.
2320 BOLINGBROOK LANE
RALEIGH, NORTH CAROLINA 27613
919-848-6313
41068
Attorney

HUMPHREY, CHRISTOPHER M.
ALSTON & BIRD L.L.P.
3605 GLENWOOD AVENUE
RALEIGH, NORTH CAROLINA 27622
919-420-2200
43683
Attorney

KNOWLES, ANDREW T.
KILPATRICK STOCKTON L.L.P.
4101 LAKE BOONE TRAIL
RALEIGH, NORTH CAROLINA 27607
919-420-1779
33525
Attorney

KRASNOW, DAVID M.
ALSTON & BIRD L.L.P.
3605 GLENWOOD AVENUE
SUITE 310
RALEIGH, NORTH CAROLINA 27622
919-420-2200
34203
Attorney

KUSZAJ, JAMES M.
OGLETREE, DEAKINS, NASH,
SMOAK & STEWART
P.O. BOX 31608
RALEIGH, NORTH CAROLINA 27622
919-787-9700
27652
Attorney

LAWTON, WILLIAM CHARLES
WAKE CO. DISTRICT COURT JUDGE
P.O. BOX 351
RALEIGH, NORTH CAROLINA 27602
919-755-4101
25995
Attorney

MEEKS, ROBERT M.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
40723
Attorney

MOHR, JOHN C.
729 PEBBLEBROOK DR.
RALEIGH, NORTH CAROLINA 27609
919-790-9886
35618
Attorney

MOORE, DAVID SCOTT
MYERS, BIGEL, SIBLEY
& SAJOVEC, P.A.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
42011
Attorney

MORGAN, RUSSELL T.
KILPATRICK STOCKTON L.L.P.
4101 LAKE BOONE TRAIL
SUITE 400
RALEIGH NORTH CAROLINA 27607
919-420-1700
43815
Attorney

MYERS, JAMES D.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
28330
Attorney

O SULLIVAN, TIMOTHY J.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
35632
Attorney

OWEN, JOHN R.
RHODES, COATS & BENNETT LLP
P.O. BOX 5
RALEIGH, NORTH CAROLINA 27602
919-832-3946
42055
Attorney

PASSE, JAMES G.
1913 TORREY PINES PL.
RALEIGH, NORTH CAROLINA 27615
919-876-4221
29966
Attorney

PAWL, DEBRA L.
CLOSURE MEDICAL CORPORATION
5250 GREENS DAIRY ROAD
RALEIGH, NORTH CAROLINA 27616
919-876-7800
30794
Attorney

PHILLIPS, JOHN S.
7928 MCGUIRE DRIVE
RALEIGH, NORTH CAROLINA 27616
919-876-5553
44288
Agent

PITA, FRANK J.
ALSTON & BIRD, L.L.P.
3605 GLENWOOD AVENUE
SUITE 310
RALEIGH, NORTH CAROLINA 27622
919-420-2200
41511
Attorney

RICHARDSON, JULIE H.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
40142
Attorney

ROSENTHAL, ROBERT G.
ROSENTHAL & PUTTERMAN
5856 FARINGDON PLACE
RALEIGH, NORTH CAROLINA 27609
919-872-4911
31564
Attorney

RYAN, KATHLEEN A.
16 WEST MARTIN STREET
RALEIGH, NORTH CAROLINA 27601
919-821-5522
36909
Attorney

SAJOVEC, F. MICHAEL
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
31793
Attorney

SALE, ELAINE T.
ALSTON & BIRD, L.L.P.
3605 GLENWOOD AVENUE
SUITE 310
RALEIGH, NORTH CAROLINA 27622
919-420-2200
41286
Agent

SCHADEL, WILLIAM E.
3616 FERNWOOD DRIVE
RALEIGH, NORTH CAROLINA 27612
919-781-9723
33774
Attorney

SCOTT, GRANT J.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
36925
Attorney

SHROUT, LARRY T.
SQUARE D COMPANY
P.O. BOX 27446
RALEIGH, NORTH CAROLINA 27611
919-266-8625
35357
Agent

SIBLEY, KENNETH D.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
31665
Attorney

SMITH, ROBERT J.
MYERS, BIGEL, SIBLEY
& SAJOVEC, L.L.P.
P.O. BOX 37428
RALEIGH, NORTH CAROLINA 27627
919-854-1400
40820
Attorney

SPRUILL, W. MURRAY
ALSTON & BIRD L.L.P.
3605 GLENWOOD AVENUE
SUITE 310
P.O. DRAWER 31107
RALEIGH, NORTH CAROLINA 27622
919-420-2200
32943
Attorney

WOLF, NATHAN J.
7408 SPYGLASS WAY
RALEIGH, NORTH CAROLINA 27615
919-790-8857
39075
Attorney

Research Triangle Park

BARRETT, WILLIAM A.
INTELLECTUAL PROPERTY
TECHNOLOGY LAW I P T L
P. O. BOX 14329

RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-419-9350
42296
Attorney

BOGDON, BERNARD DAVID
I B M CORP.
3039 CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-4753
24773
Attorney

BREARS, TIMOTHY
NOVARTIS CORPORATION
3054 CORNWALLIS ROAD
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8516
40474
Agent

BRINK, ROBERT H.
GLAXO WELLCOME INC.
5 MOORE DR.
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-248-2100
36094
Agent

CALOGERO, STEPHEN A.
ERICSSON INC.
7001 DEVELOPMENT DRIVE
P.O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-1154
41491
Attorney

CLAY, ALAN B.
I B M CORPORATION
T81B / BLDG. 062
P.O. BOX 12195
3039 CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-254-6717
32121
Agent

COCKBURN, JOSCELYN G.
I.B.M. CORPORATION
972/205
CORNWALLIS ROAD
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-9036
27069
Attorney

CONTE, SALVATORE R.

GLAXO INC.
5 MOORE DRIVE
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-248-2519
20036
Attorney

CROFT, THOMAS M.
ERICSSON INC.
7001 DEVELOPMENT DRIVE
DAVIS -2B
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-7249
44051
Agent

DADSWELL, CHARLES E.
GLAXO, INC.
FIVE MOORE DRIVE
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-990-6983
35851
Attorney

DOUDNIKOFF, GREGORY M.
I B M CORPORATION
DEPT. 972/B205
3039 CORNWALLIS ROAD
POST OFFICE BOX 12195
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-0182
32847
Attorney

DUFFIELD, EDWARD H.
I B M CORP.
DEPT. 972/BLDG. 205
P.O. BOX 12195
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-4710
25970
Attorney

FLYNN, KEVIN E.
DANIELS & DANIELS
P.O. BOX DRAWER 12218
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709-2218
919-544-5444
37325
Attorney

GARDNER, LINDA L.
SEMICONDUCTOR RESEARCH CORP.
P.O. BOX 12053
79 ALEXANDER DR., BLDG 4401
SUITE 300
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-9447

32693
Agent

GRASSLER, FRANK P.
GLAXO WELLCOME AVE.
5 MOORE DRIVE
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-483-2482
31164
Attorney

GROSSER, GEORGE E.
I B M CORPORATION
3039 CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-254-4753
25629
Attorney

HAVILL, RICHARD BLAKE
INTELLECTUAL PROPERTY/
TECHNOLOGY LAW
200 PARK OFFICES DR., STE. 210
P. O. BOX 14329
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-990-9531
24192
Attorney

HEHMAN, MARY K.
NOVARTIS CORPORATION
PATENT DEPARTMENT
3054 CORNWALLIS ROAD
POST OFFICE BOX 12257
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8525
39206
Attorney

HERNDON, JERRY W.
I B M CORPORATION
P.O. BOX 12195
972/B205
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-3754
27901
Attorney

HOXIE, THOMAS
NOVARTIS CORPORATION
PATENT AND TRADEMARK DEPT.
P.O. BOX 12257
3054 CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8614
32993
Attorney

HRUBIEC, ROBERT T.
BURROUGHS WELLCOME CO.
3030 CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-248-8514
36392
Agent

HULTQUIST, STEVEN J.
INTELL. PROP. TECHNOLOGY LAW
P.O. BOX 14329
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-990-9531
28021
Attorney

HUNT, MICHELLE D.
NOVARTIS CROP PROTECTION, INC.
3054 CORNWALLIS ROAD
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8694
42678
Agent

IRVIN, DAVID R.
ERICSSON INC.
7001 DEVELOPMENT DRIVE
P. O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-7821
42682
Agent

JEN, GEORGE C.
NOVARTIS CORPORATION
PATENT AND TRADEMARK DEPT.
P.O. BOX 12257
3054 CORNWALLIS ROAD
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-597-3033
39239
Agent

JOYNER, CHARLES T.
GLAXO INC.
5 MOORE DRIVE
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-248-2192
30466
Attorney

KEOHANE, STEPHEN T.
I B M CORP.
P.O. BOX 12195
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-0117
34360
Agent

KERNER, HERBERT V.
ERICSSON INC.
7001 DEVELOPMENT DRIVE
P.O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-1712
42721
Attorney

KOTLARZ, GEORGE J.
I B M CORPORATION
3039 CORNWALLIS RD.
BLDG. 2, M.S. 9 C C A / 002
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-254-8407
35577
Attorney

LEBEL, EDOUARD G.
NOVARTIS AGRIBUSINESS
BIOTECHNOLOGY RESEARCH, INC.
3054 CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8502
43742
Agent

LEVY, DAVID J.
GLAXO WELLCOME INC.
P.O. BOX 13398
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-483-2723
27655
Attorney

MAGISTRALE, ANTHONY N.
I B M CORPORATION
3039 CORNWALLIS RD.
9 C C A /205
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-4198
35595
Attorney

MAKIJINA, SHAH R.
GLAXO WELLCOME INC.
5 MOORE DRIVE
P.O. BOX 13398
M A I B-492
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-483-1276
41174
Attorney

MC CONNELL, DANIEL E.
I B M COMPUTER CO.
LEGAL DEPARTMENT

D-9 C Z B-205/2
P.O. BOX 12195
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-1105
20360
Attorney

MC KINLEY, MARTIN J.
I B M CORPORATION, P.C.
LEGAL DEPT.
3039 CORNWALLIS RD.
DEPT. 9 C C A / BLDG. 002-2
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-254-2578
31782
Attorney

MEIGS, JOSEPH T.
NOVARTIS CORPORATION
3054 CORNWALLIS ROAD
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8587
38241
Attorney

MOORE, CHARLES L., JR.
ERICSSON INC.
7001 DEVELOPMENT DRIVE
P.O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-7432
33742
Attorney

MORGAN, LORIE A.
GLAXO WELLCOME INC.
FIVE MOORE DRIVE
POST OFFICE BOX 13398
RESEARCH TRIANGLE, NORTH CAROLINA 27709
919-483-8222
38181
Attorney

NOWAK, HENRY P.
PARADIGM GENETICS, INC.
P.O. BOX 14528
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709-4528
919-544-5578
33200
Attorney

PACE, GARY M.
NOVARTIS CORPORATION
P.O. BOX 12257
3054 CORNWALLIS ROAD
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8582
40403

Attorney

PHILLIPS, STEVEN B.
NORTHERN TELECOM
PATENT DEPARTMENT
P.O. BOX 13828
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-992-4463
37911
Attorney

PRUS, KAREN L.
GLAXO WELLCOME INC.
FIVE MOORE DRIVE
P.O. BOX 13398
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-483-2192
39337
Attorney

PURKS, DAVID K.
ERICSSON, INC.
7001 DEVELOPMENT DRIVE
P.O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-7280
40133
Attorney

RAY, JEANINE S.
I B M CORPORATION
3039 CORNWALLIS ROAD
D972 / B656
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-2541
39808
Attorney

ROCKAFELLOW, CAROLINE H.
DANIELS & DANIELS
POST OFFICE DRAWER 12218
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-544-5444
36552
Attorney

ROGERS, CHRISTOPHER P.
GLAXOWELLCOME, INC.
5 MOORE DRIVE, MAI.B476
P.O. BOX 13398
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-483-1240
36334
Agent

SAVAGE, MICHAEL G.
BURNS, DOANE, SWECKER
& MATHIS

P.O. BOX 14846
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-941-9240
32596
Attorney

SELBY, ELIZABETH
GLAXO WELLCOME INC.
FIVE MOORE DRIVE
P.O. BOX 13398
MAIN B479A
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-483-3934
38298
Attorney

SEMBRAT, KEVIN A.
ERICSSON INC.
7001 DEVELOPMENT DRIVE
P.O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-1924
36673
Attorney

ST. JULIAN, HORACE
I B M CORPORATION
3039 CORNWALLIS RD.
9 C C A /002-2
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-9640
30329
Attorney

STEPHENS, DEBRA K.
ERICSSON, INC.
7001 DEVELOPMENT DRIVE
P.O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709-9000
919-472-6495
38211
Attorney

STULTS, LARRY W.
NOVARTIS CORPORATION
3054 CORNWALLIS ROAD
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-541-8666
34025
Attorney

TERRANO, MARK C.
ERICSSON INC.
7001 DEVELOPMENT DRIVE
P.O. BOX 13969
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-472-1771
40200

Attorney

THEISSEN, ROBERT J.
RHONE-POULENC A G CO.
2 ALEXANDER DRIVE
P.O. BOX 12014
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-549-2254
34447
Agent

WOODS, GERALD RAY
I B M CORPORATION
P.O. BOX 12195
972/B656
RESEARCH TRIANGLE PARK, NORTH CAROLINA 27709
919-543-7204
24144
Attorney

Rocky Mount

PARKER, DE LEON, JR.
INCO, INC.
1200 ATLANTIC AVENUE
ROCKY MOUNT, NORTH CAROLINA 27802
1-888-672-4626
42978
Attorney

Sanford

LONDON, WILLIAM L.
STATIC CONTROL COMPONENTS, INC.
3010 LEE AVENUE
SANFORD, NORTH CAROLINA 27331
919-774-3808
37173
Attorney

Shelby

GAULT, HAROLD S.
824 SOUTH DEKALB STREET
SHELBY, NORTH CAROLINA 28150
909-626-5500
29152
Attorney

Southern Shores

HIX, LEE T.
47 MISTLETOE LANE
SOUTHERN SHORES, NORTH CAROLINA 27949
919-261-0124
41447
Agent

Southport

MAUNEY, MICHAEL E.
801 N. HOWE STREET
SOUTHPORT, NORTH CAROLINA 28461
910-457-0056
33731
Attorney

Stanfield

HANWAY, JOHN R.
1706 POLK FORD RD.
STANFIELD, NORTH CAROLINA 28163
704-888-3088
26461
Attorney

Stoney Creek

HUREWITZ, DAVID L.
722 GREYROCK ROAD
STONEY CREEK, NORTH CAROLINA 27377
910-449-9036
24921
Attorney

Vaggie Valley

JOHNSON, PAUL
P.O. BOX 2051
VAGGIE VALLEY, NORTH CAROLINA 28751
919-660-1500
35559
Attorney

Wadesboro

CORNWELL, ABNER MILTON, JR.
ROOM 209 POST OFFICE BLDG.
105 EAST MARTIN STREET
WADESBORO, NORTH CAROLINA 28170
704-694-9550
22295
Attorney

Wake Forest

CHAPEK, CARLOS
6305 WINTER SPRING DRIVE
WAKE FOREST, NORTH CAROLINA 27587
919-554-4168
43326
Attorney

COOKE, DERMOTT J.
P.O. BOX 1385
WAKE FOREST, NORTH CAROLINA 27588
919-556-8367
41685
Attorney

MILLS, JOHN G., III
853H BUSINESS PARK
P.O. BOX 587
WAKE FOREST, NORTH CAROLINA 27588
919-554-4200
20563
Attorney

REY, CLIFFORD F.
THE LAW OFFICE OF CLIFFORD F. REY
853-I WAKE FOREST BUSINESS PARK
POST OFFICE BOX 1555
WAKE FOREST, NORTH CAROLINA 27588
919-570-5030
37920
Attorney

Whispering Pines

FIELD, ALEXANDER RAYMOND
57 SANDPIPER DR.
WHISPERING PINES, NORTH CAROLINA 28327
910-949-2688
22033
Attorney

Wilmington

EDDENS, FLETCHER C.
1730 FAIRWAY DRIVE
WILMINGTON, NORTH CAROLINA 28403
919-762-0600
30458
Agent

FONTANA, STEVEN A.
APPLIED ANALYTICAL
INDUSTRIES, INC.
5051 NEW CENTRE DR.
WILMINGTON, NORTH CAROLINA 28403
910-392-1606
34599
Attorney

MASON, WILLIAM J.
RHODES & MASON, P.L.L.C.
201 NORTH FRONT STREET
SUITE 604
WILMINGTON, NORTH CAROLINA 28401
910-763-2382
22948

Attorney

MC GINNESS, JAMES E.
GENERAL ELECTRIC
NUCLEAR ENERGY
3901 CASTLE HAYNE RD.
M.C. A11
WILMINGTON, NORTH CAROLINA 28401
910-675-6166
33260
Attorney

Winston-Salem

BICK, VINCENT F., JR.
R.J. REYNOLDS TOBACCO CO.
401 NORTH MAIN STREET
WINSTON-SALEM, NORTH CAROLINA 27102
919-741-2546
25155
Attorney

BLUHM, HERBERT J.
4101 TANGLE LANE
WINSTON-SALEM, NORTH CAROLINA 27106
919-723-7412
25953
Agent

BORSCHKE, AUGUST J.
R.J. REYNOLDS TOBACCO CO.
R. J. REYNOLDS BLDG.
WINSTON-SALEM, NORTH CAROLINA 27102
919-773-5491
30539
Attorney

CALKINS, CHARLES W.
PETREE STOCKTON, L.L.P.
1001 WEST FOURTH STREET
WINSTON-SALEM, NORTH CAROLINA 27101
920-607-7300
31814
Attorney

DANIEL, CHRISTOPHER G.
WOMBLE, CARLYLE,
SANDRIDGE & RICE
200 W. SECOND STREET
P.O. DRAWER 84
WINSTON-SALEM, NORTH CAROLINA 27102
910-721-3719
38853
Attorney

DUSINA, JANE M.
WOMBLE, CARLYLE, SANDRIDGE
& RICE, P.L.L.C.

200 WEST SECOND STREET
POST OFFICE DRAWER 84
WINSTON-SALEM NORTH CAROLINA 27102
910-741-3841
41724
Attorney

GARDNER, JOHN S.
KILPATRICK STOCKTON, L. L. P.
1001 WEST FOURTH STREET
WINSTON-SALEM, NORTH CAROLINA 27101
336-607-7483
41772
Attorney

HARRINGTON, JOHN M.
PETREE STOCKTON
1001 WEST FOURTH STREET
WINSTON-SALEM, NORTH CAROLINA 27101
919-725-2351
25592
Attorney

KENNEDY, PAT WINSTON
KILPATRICK STOCKTON LLP
1001 WEST FOURTH STREET
WINSTON SALEM, NORTH CAROLINA 27101
336-607-7300
36970
Attorney

KRIEGSMAN, ALANA G.
KILPATRICK STOCKTON LLP
1001 WEST FOURTH STREET
WINSTON-SALEM, NORTH CAROLINA 27101
336-607-7300
41747
Attorney

LACKEY, CHARLES YOUNT
P.O. BOX 5871
WINSTON-SALEM, NORTH CAROLINA 27113
910-744-0473
22707
Attorney

MASSEY, CARL B., JR.
KILPATRICK STOCKTON, L.L.C.
1001 W. FOURTH STREET
WINSTON-SALEM, NORTH CAROLINA 27101
44224
Attorney

MYERS, GROVER M.
R.J. REYNOLDS TOBACCO CO.
P.O. BOX 1487
950 REYNOLDS BLVD.
WINSTON-SALEM, NORTH CAROLINA 27102

910-741-2694
25359
Attorney

PITTS, ROBERT W.
P.O. BOX 11483
WINSTON-SALEM, NORTH CAROLINA 27116
336-759-2800
27372
Attorney

H. Sample Confidentiality Agreements

The material presented in this example confidentiality agreement is presented for illustrational purposes only. This model agreement is typical of agreements used when disclosing the idea to another person to assist in the product development process. You may want to consult with a licensed attorney to develop an agreement suitable for your specific situation for contractual purposes.

CONFIDENTIALITY AGREEMENT (for product development assistance)

(inventor name)
(address)
(date)

(name)
(undersigned company name)
(undersigned company address)

Subject: Secrecy Agreement to Protect Confidential Information of
_____ (inventor's name), hereinafter referred to as "discloser"

Dear _____ :

The purpose of this letter is to set forth the following terms and conditions under which the discloser will disclose the aforesaid confidential information to enable you to assist in the product development process.

The terms and conditions are as follows:

- I. Disclosure shall disclose to you such of discloser's confidential information as discloser deems necessary to enable you to assist in the product development process.
- II. Until five (5) years from the date of such disclosure, you shall not use, exception for such evaluation, and shall not disclose to any third party any information disclosed to you by discloser in writing, visually, orally, by graphic means, or in any other fashion pursuant to paragraph (1) hereof.
- III. It is understood that you shall be under no obligation of non-use and non-disclosure with respect to any information which:
 - A. is already available to the public;
 - B. is or becomes available to the public through no fault of yours;
 - C. is already known to you as shown by written records in your possession at the time the information is received from discloser; or
 - D. becomes available to you from a third party who is not under an obligation of confidentiality to discloser with respect thereto.
- IV. All written materials, drawings, and models supplied by the disclosure are the property of the discloser and must be returned to discloser if requested by the discloser. No copies or reproductions of written materials, drawings models are permitted unless authorized specifically by the discloser in writing.
- V. This agreement shall be interpreted, construed, and enforceable in accordance with the laws of the State of North Carolina regardless of the place of execution hereof or the place of performance of any portion hereof.

This letter is transmitted to you in duplicate. If the foregoing terms and conditions are acceptable, please sign both copies of this agreement and return one fully signed copy to discloser, whereupon this will become a binding agreement between the parties.

Very truly yours,

(name of discloser)

Understood and Agreed to:

Company name: _____

Company Representative: _____ (signature)

Company Representative: _____ (printed/typed)

Effective Date: _____ (month, day, year)

- VI. All written materials, drawings, and models supplied by the disclosure are the property of the discloser and must be returned to discloser if requested by the discloser. No copies or reproductions of written materials, drawings models are permitted unless authorized specifically by the discloser in writing.
- VII. This agreement shall be interpreted, construed, and enforceable in accordance with the laws of the State of North Carolina regardless of the place of execution hereof or the place of performance of any portion hereof.

This letter is transmitted to you in duplicate. If the foregoing terms and conditions are acceptable, please sign both copies of this agreement and return one fully signed copy to discloser, whereupon this will become a binding agreement between the parties.

Very truly yours,

(name of discloser)

Understood and Agreed to:

Company name: _____

Company Representative: _____ (signature)

Company Representative: _____ (printed/typed)

Effective Date: _____ (month, day, year)

I. Associations

Intellectual Property Associations

While going through the process of securing and developing your intellectual property, you might benefit from membership in an inventor's association. Listed below are

Association	Contact	Dues	Activities
Affiliated Inventors Foundation	719/635-1234	N/A	Encourages/assists inventors; Low-cost/free patent attorney and consultant services
American Society of Inventors	215/546-6601	\$55	Works with government to improve inventor environment; encourages invention/innovation; sponsors educational programs
Intellectual Property Owners	1255 23 rd St NW, Ste. 850 Washington, DC 20037 202/466-2396	?	Seeks to strengthen the patent, trademark, copyrights, and trade secret laws; monitors legislative activities; awards and publications
Inventors Assistance League, International	345 W Cypress St Glendale, CA 91204 818/246-6540	N/A	Brings together inventors and manufacturers; helps bring products to marketplace; speakers' bureau, museum, Hall of Fame
Inventors Clubs of America (ICA)	PO Box 450261 Atlanta, GA 31145-0261 404/355-8889 800/336-0169	Full: \$200 Assoc: \$50	Problem solving/inventing; patenting, development, manufacturing, marketing, advertising assistance; conducts research and education programs; speakers bureau
Inventor's Guild	Box 132 Plainview, TX 79073	\$100	Copyright/trademark info; research programs
Inventor's Workshop International Education Foundation (IWEF)	7332 Mason Ave. Canoga Park, CA 91306 818/340-4268	\$139	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)	727 N 600 W Logan, UT 84321 801/753-0888	\$200	Inventor education programs; speakers bureau
National Inventors Foundation (NIF)	345 W Cypress St Glendale, CA 91204 818/246-6540	N/A	Invention protection/promotion information
United Inventors Association of the USA	PO Box 23447 Rochester, NY 14692 716/359-9310	\$75	Information on Patent Reform; grant information and referrals for inventors; <i>Inventor's Digest</i> publication; active liason 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. We suggest that if you are interested in joining a trade organization, you refer to the *Directory of Associations* which lists associations by category and SIC code and includes contact information. You should find a copy of the directory in your local library.

Entrepreneurial Councils

The seven entrepreneurial councils in North Carolina provide educational and networking opportunities to entrepreneurs across the state. The councils are outlined below:

Council	Contact	Basic dues	Benefits
Coastal Entrepreneurial Council in Wilmington (CEC)	910/962-3901 Anne Nemmers	\$50	Monthly meetings; networking; member-to-member counseling; annual mini-conference; annual awards banquet; business resource library
The Council for Entrepreneurial Development in the Research Triangle Park (CED)	919/544-4642 Carolyn Foy	\$110	Formal entrepreneurial training; special interest roundtables; capital formation conference; mentoring; newsletter and guide
Eastern Entrepreneurial Development Board in Greenville (EEDB)	919/328-6650 Al Delia	*currently inactive	Education and training programs; presentations by prospective entrepreneurs to investors
Metrolina Entrepreneurial Council in Charlotte (MEC)	704/544-7780 Bonnie Post, Exec. Director	\$125	Educational meetings; annual capital access conference; annual mayor's conference on entrepreneurship; Trailblazer Award; Business Review Team; roundtable discussions; website (http://www.mec.org)
NorthEastern Entrepreneurs Roundtable in Rocky Mount (NEER)	919/442-5111 Sherry Johnson	Educator/ Student: \$50 Entrepreneur: \$50 per company	Educational meetings; annual banquet
Piedmont Entrepreneurs Network in the Triad (PEN)	336/774-1411 Paul Reali	\$120	Monthly dinners; breakfast roundtables; workshops; web page; newsletter; networking
SouthEastern Entrepreneurs Roundtable in Fayetteville (SEER)	910/867-9394 Sharon Valentine 910/486-1727 Sid Gautam 910/630-7000 Joe Doll	* currently inactive	

J. Finding Necessary Goods and Services

Appendix: Finding necessary goods and services

We cannot include in this publication a comprehensive list of the companies you will need to do business with while developing, manufacturing, marketing, and/or selling your invention. What we can include are instructions how to identify the appropriate businesses to meet your product and service 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 and individual categories are identified by their SIC (Standard Industry Classification) code. SIC codes are the Department of Commerce's method of cataloguing the nation's industries. An *SIC Code Manual* also pairs industry categories with their codes. OSHA has a website in which you can access and search the 1987 *SIC Code Manual*: www.osha.gov/oshstats/sicser.html

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

The American Business Directory can also provide SIC-grouped businesses, but on a national scale. *The American Business Directory* 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).

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”)

As emphasized throughout this booklet, the internet is also an excellent way to search for businesses appropriate to your needs. The online business databases can supplement your *NC Business Directory* search. See especially: *The Thomas Register of American Manufacturers* (www2.thomasregister.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 your local university offers testing services. Contact the university's Technology Transfer office or the appropriate academic department for information. Accredited North Carolina engineering schools include Duke University, North Carolina

A&T, North Carolina State University, UNC-Chapel Hill (in biomedical, chemical, and environmental engineering only), and UNC-Charlotte. Most large institutions have a shop to fabricate scientific apparatuses.

K. General business information and assistance resources

General business information & assistance resources

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

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

Asheville	828/251-6025
Boone	828/262-2492
Chapel Hill	919/962-0389
Charlotte	704/548-1090
Cullowhee	828/227-7492
Elizabeth City	252/335-3247
Fayetteville	910/486-1727
Greensboro	336/334-7005
Greenville	252/328-6157
Hickory	828/345-1110
Pembroke	910/521-0520
Wilmington	910/962-3744
Winston-Salem	336/750-2030

If you are not sure which office to call, you may contact the SBTDC Headquarters in Raleigh at 800/258-0862 or 919/715-7272.

- Small Business Centers at your local community college (business start-up information and services)
- U.S. Small Business Administration (SBA), Charlotte Office, 704/344-6563
- Local public library or college/university library
- Various websites listed in this publication

