University of North Texas Intellectual Property Commercialization Frequently Asked Questions

<u>Authorship</u>

What do we mean by "Authorship"?

"Authorship" means that the work, whether a literary work, software, or any other, is the product of original, creative authorship. "Original" does not mean "novel" as with patents; it means that it is solely a product of the author and was not copied from another's work. Originality is the sole requirement. Copyright protection requires some degree of creative authorship.

Background Technology

• What is Background Technology?

Background Technology (or Underlying Technology) is pre-existing technology that is essential to practice an invention. It can also include technology that it is desirable to have in order to best practice an invention.

Why is Background Technology important?

Giving a third party rights to Background Technology, inadvertently or not, or using that technology without the right to do so, can lead to litigation. This is due to issues of ownership of Background Technology that might not be apparent.

• Why is Industry so concerned about Background Technology?

There is always the risk that a "surprise" patent will be found later to which a licensee will require rights in order to use intellectual property that has been licensed to them. The licensee wants to minimize the risk of future "surprise" IP, and wants as close as possible to guarantee that there will be no "surprising" IP. Universities cannot give that, which is why we always say "to the best of our knowledge" or "subject to the rights of third parties."

What should I do to minimize the chance of inadvertently using Background Technology?

Practice "hygiene." Do a patent search yourself, carefully review any prior art found during that search and review any other patents that may be brought to your attention by UNT or our attorneys as a result of further patent searches. Also, do a literature search and keep up to date on all new publications that may relate to the field of your invention.

<u>Bayh-Doyle Act</u>

• What is the Bayh-Dole Act?

UNT is subject to the Bayh-Dole Act that sets out the disposition of inventions made with federal assistance. The Act provides that the institution may elect to retain title to inventions conceived or first reduced to practice in the performance of work under a federally funding agreement. UNT must disclose each invention to the government sponsor in a timely manner and comply with other regulatory actions. In addition, we must grant the U.S. government a royalty free license for governmental purposes, give preference to U.S manufacturers, give preference to small businesses, and share income with inventory. We must also periodically report our patenting and commercialization activity to the government. We must adhere to these provisions of the Act regardless of how little federal funding was utilized in the conception or development of the invention.

<u>Claim</u>

• What is a claim?

A claim in a patent application represents one or more of the essential conceptual elements that make up the invention. Taken together, the claims define the scope of the invention by describing the specific features that distinguish the invention from the prior art. They also provide the basis for legal enforcement of the patent.

How are claims written?

Claims are first written as broadly as possible and then, more narrowly. It is usually easier to obtain a patent with narrow claims but, if too narrow, others can invent or engineer around the patented invention.

Co-Inventor (See "Inventor")

<u>Confidentiality Agreement (See "Non-Disclosure Agreement")</u>

Conflict of Interest

What is conflict of interest?

"Conflict" can be defined as "any outside activity or financial interest which interferes with the full and faithful performance of the employee's responsibilities or obligations to the institution." The term "conflict of interest" refers to situations in which financial or other personal considerations may directly and significantly affect, or have the appearance of directly and significantly affecting, a faculty member or staff member's judgment in exercising any UNT duty or responsibility or in the conducting or reporting of research. The bias that such conflicts may conceivably impart can adversely affect many UNT activities, including decisions about the supervision or evaluation of students, collection, analysis and interpretation of data, sharing of results, choice of protocol, use of statistical methods, and restrictions on publication.

What are considered conflicts of interest?

You would be considered to have a conflict of interest when you, or any member of your family, has a significant financial interest in an activity that involves your responsibility as a UNT employee. In addition, it would be considered a conflict of interest if, without UNT approval, you conducted research in the field of your UNT responsibilities externally and in competition with the UNT when that research is within the scope of your UNT employment.

What should I do to minimize any potential conflict of interest?

Unless any potential conflicts are being managed in accordance with the UNT's Conflict of Interest for Sponsored Projects Policy, your activities and financial interests should be arranged so that they do not affect the University's interests, do not compromise objectivity in carrying out your UNT responsibilities, or do not otherwise compromise the performance of your UNT responsibilities. It should be remembered that nearly every licensing arrangement will have the potential for conflict of interest, but these potential conflicts can normally be managed without detriment to the interests of both the faculty or staff member and UNT.

Copyright

• What is a copyright?

A copyright is a property right that protects you against the copying of "original works of

authorship fixed in any tangible medium of expression." These can include literary works, computer programs, musical, pictorial and graphic works, audiovisual works and architectural works. Copyright protection is available for both published and unpublished works. A copyright does not protect an idea, but only your specific expression of that idea. In the case of software, copyright protects the structure, sequence and organization of a software program. In the Copyright Act, a computer program is defined as a "set of statements or instructions to be used directly or indirectly in order to bring about a certain result."

How do you obtain copyright protection?

A copyright exists in a work as soon as it is created and fixed in a tangible medium. A notice of copyright should be placed on all published and unpublished copies of work; although this is not legally required under the Berne Convention. However, using the copyright notice lets any potential infringer know that the work is protected by copyright and the identity of the owner. It also prevents an infringer in copyright litigation from using the defense of "innocent infringement." The use of the copyright notice does not require permission from, or registration with, the Copyright Office.

Should copyright be registered?

Registration with the Copyright Office is not a requirement for protection, although in a few appropriate cases it may offer some advantages. These include establishing a public record of the copyright claim, and it is a prerequisite for bringing a suit for copyright infringement.

Disclosure (also see "Public Disclosure")

• What does "disclosure" mean?

A "disclosure" is the formal act of advising UNT of an invention or copyright. This is done by submitting an Intellectual Property Disclosure Form, which is a written document describing the technology. The disclosure should be in sufficient detail to permit an evaluation of the scientific and technical merit of the invention, whether and how the invention can be protected and its apparent commercial value.

• How do I obtain an Intellectual Property Disclosure Form?

Download from the Office of Technology Transfer (OTT) webpage. The Disclosure includes a description of the invention, the names of the inventory, the date of conception, who sponsored the work, advantages of and applications for the invention, any public disclosures or publications and details of any identified relevant prior art.

• Must I always submit an Intellectual Property Form?

UNT policy requires that all potentially patentable inventions or copyrightable material, other than scholarly works, conceived or reduced to practice in whole or in part by members of the faculty, staff, or students of UNT in the course of their UNT responsibilities, or with more than incidental use of UNT resources, be disclosed on a timely basis to OTT. Title to such intellectual property is assigned to UNT, regardless of the source of funding. A Disclosure must always be made promptly of any invention or software program conceived or developed during the performance of your assigned duties. UNT has a responsibility to advise any sponsor, whether government or non-government, of any invention conceived during the course of any sponsored research project. In other cases, disclosure is necessary to protect the interests not only of UNT, but also the inventor(s).

When should I submit the disclosure?

You should submit a disclosure as soon as the invention has been recognized or identified.

Recognition or identification of the invention is the most important step in the technology transfer process. It can often be accomplished by asking two simple questions: "Is this discovery new?" and "Is this discovery useful?" It is always better to ask these questions earlier than later. The best time to ask them is each time an experiment or line of enquiry has been completed. Other times that they should be asked are during the preparation of papers, presentations and proposals before any public disclosure of those papers, presentations or proposals.

How do I benefit from disclosing an invention to UNT?

Submitting a disclosure satisfies one of the requirements of your employment. Also, without disclosure there can be no patent application. Patents are essential to the successful commercialization of many inventions, particularly those that require large investments to complete development to the commercial stage. There is little likelihood that such inventions will ever become available to the public without patent protection, which provides the investor market exclusivity long enough to recoup the costs of bringing the product to market. So, as well as meeting a condition of your employment, you may have the satisfaction of seeing your invention developed and commercialized; you may receive research support from a licensee or potential licensee for the further development of the technology; you may get your name on a patent without cost to you; the licensee may be interested in retaining you as a consultant; and if the invention is successfully commercialized you will share in the income received by UNT. Your exposure to the licensing process also increases your exposure to the particular industry's expertise and needs, thus benefiting you, your students, and UNT.

How detailed should the description of the invention be?

Your disclosure to UNT should be as detailed as possible. An abstract can be included in the disclosure form and a more detailed description attached to the form. All information provided to UNT is confidential. Without adequate information, UNT cannot perform a complete evaluation of the likely commercial potential of the invention or obtain an accurate opinion on its apparent patentability. Furthermore, any patent application would be futile, as the attorney would not possess adequate information to draft a specification and a set of claims that would provide sufficient protection for the invention.

• If I have been working on something in an outside collaboration should I disclose the invention to UNT?

Yes. Please disclose technology developed as a result of outside collaboration to UNT even if your collaborator offers to handle the invention. The employer of each inventor may have ownership in the invention. UNT will coordinate with other joint owners of inventions and will negotiate how the invention will be managed and any potential royalties shared.

Why is the contract/grant information important to UNT?

Under federal law, UNT is required to report to the government inventions created under government sponsored research. If UNT decides not to keep title to the invention (that is, decides not to keep it), then the government has the rights to it. In such a case, if the government does not wish to pursue the invention, it may be assigned back to the inventory if they should so wish. Nongovernmental sponsors may also have intellectual property clauses and obligations attached to their sponsorship with which the university must comply.

Why are the dates of conception and disclosure important?

The U.S. patent system is a "first-to-invent" system. That is, the party that can prove they were the first to conceive an invention and demonstrate a reasonable level of diligence in reducing the invention to practice will be awarded the patent rights. This is why keeping a dated and witnessed laboratory notebook, as well as other records of your research is so important (see

"Laboratory Notebook"). The dates of disclosure are important because an inventor has one year from the date of public disclosure in the U.S. in which to file a patent application. This includes oral disclosure at a public meeting, any written disclosure that, wholly or in-part, allows one skilled in the art to make or use the invention, or offer of sale of the invention (this excludes offers of license of the invention or technology). Once that year has passed the invention cannot be patented. Also, foreign patent rights are lost once an invention has been publicly disclosed; there is no one year period of grace.

Divulgation (see also "Public Disclosure")

What is divulgation?

Divulgation, after which the rights to foreign patents are forfeited, is any non-confidential disclosure of the critical aspects or features of an invention by means of a written or oral description, by use, or in any other way. Displaying the invention where the critical features of the invention are readily discernable or distributing samples where they could be discoverable by analysis is divulgation.

<u>Income</u>

• What do we mean by "Income"?

When we use the term "income", we mean income derived by UNT from the commercialization of intellectual property. This income is distributed in accordance with UNT's Patent and Copyright Policies.

 How is the income received by UNT from technology transfer distributed? Net income, that is gross income less patenting and any other direct costs, is shared between UNT and the inventor(s). The current distribution of income is shown in UNT's Intellectual Property Policy. (The current distribution of net income is one-half to the inventor(s), and the balance to UNT. The share of the income retained by UNT is then divided 50% to the Inventory research program and 50% to defray costs of UNT's commercialization operations, including patent costs on those inventions that are not successfully commercialized, and any balance is used to further UNT's research activities.)

Why does UNT get involved in patenting and licensing?

As a public institution, UNT has an obligation/responsibility to make its research results available for the benefit of the general public. Entering into commercial arrangements for the further development of technology is often the only way by which UNT is able to ensure that the technology is made available. UNT's technology is usually at an early stage and will require a substantial investment in its further development before a product is ready for market. No company would, under normal circumstances, commit to the support of that further development unless the intellectual property is protected and without an agreement in place to ensure that it will receive commercial benefit from its investment should the further development be successful. UNT also has obligations to the U.S. government under the Bayh-Dole act relating to the protection and commercialization of inventions conceived and developed with federal government support.

Intellectual Property

• What is Intellectual Property (IP)?

"Intellectual property" is property created by the human mind and given legal protection as patents, trademarks, copyrights and trade secrets. IP is considered personal property and its ownership can be transferred to other entities by contract. Employment contracts, such as that which you signed with UNT, usually include assignment clauses assigning to the employer all intellectual property rights developed by an employee within the scope of the employment relationship.

• What is a patent?

A patent is a grant authorized by the Constitution and issued by the U.S. Patent & Trademark Office (USPTO), giving the patent owner the right to exclude others from making, using or selling an invention within the United States for a limited time period. It could be viewed as an agreement with the government wherein the government gives the inventor the exclusive right to the invention for a limited time in exchange for public disclosure of the invention. This disclosure stimulates further research, development and, hopefully, commercialization. A patent does not give the patent owner the right to practice the invention, only the right to exclude others from practicing it. It could be that you would need to obtain rights to some other party's patent in order to successfully practice the invention.

• What kinds of patents are there?

There are three kinds of patents. "Utility" patents are granted to the inventor(s) of any new and useful process, machine, article of manufacture, composition of matter, or any new and useful improvement thereof. "Design" patents are granted on any new, original and ornamental design for an article of manufacture. "Plant" patents are granted on any distinct and new variety of asexually reproduced plant.

What is a Copyright?

A copyright is a property right that protects you against the copying of "original works of authorship fixed in any tangible medium of expression." These can include literary works, computer programs, musical, pictorial and graphic works, audiovisual works and architectural works. Copyright protection is available for both published and unpublished works. A copyright does not protect an idea, but only your specific expression of that idea. In the case of software, copyright protects the structure, sequence and organization of a software program. In the Copyright Act, a computer program is defined as a "set of statements or instructions to be used directly or indirectly in order to bring about a certain result."

What is the difference between a copyright and a patent?

Patents cover ideas behind an invention and give the owner of the patent the right to prohibit others from using those ideas. Copyrights protect original works of authorship and give the owner the exclusive right to reproduce the work or license it to someone else.

• What is a Trademark?

A trademark is any word, name, symbol or device used to identify the source or origin of goods or services and to distinguish those goods and services from others.

• What is a Trade Secret?

A trade secret is business information which has been maintained confidential and which has value in the industry in that the information is not generally known and would be difficult to obtain by competitors. It includes technical or non-technical data, formulae, patterns, programs, devices, methods, techniques, drawings, processes, financial data, product plans, and customer or supplier information.

Internal Revenue Service Procedure 97-14, Guidelines for Research Agreements

• What is IRS Procedure 97-14?

Internal Revenue Service Procedure 97-14 is relevant in those cases where a research sponsor is seeking to acquire intellectual property rights to any invention that may emanate from the sponsored research prior to the development of the invention. Generally it provides that the sponsor must pay a competitive price for rights to any invention.

Invention

What is an invention?

An invention is a new device, method or process developed from study or experimentation. Recognition or identification of the invention is the most important step in the technology transfer process. It can often be accomplished by asking three simple questions: "Is this discovery new?", "Is this discovery useful?" and "Is this invention unobvious to one of ordinary skill in the art?" It is always better to ask these questions earlier than later. The best time to ask them is each time an experiment or line of enquiry has been completed. Other times that they should be asked are during the preparation of papers, presentations and proposals but before public disclosure of those papers, presentations or proposals.

• What should be done if I think I have made an invention?

You should submit an invention disclosure for all inventions. Completed disclosures should be sent to OTT. Also, you should ensure that the conception and development of your invention has been recorded in your laboratory notebook.

- How do I disclose an invention to OTT? By completing and submitting an Intellectual Property Disclosure Form (which can be downloaded from the OTT website).
- How do I know when my invention is complete enough to file a patent application on it? Two things signify the completion of an invention: conception and reduction to practice. Reduction to practice is successfully using the invention in its intended way. This should be witnessed by an uninvolved party (i.e. not your grad student or lab tech) and recorded. A written description of an invention should be made as soon as possible after its conception, witnessed and dated, since dates of conception and reduction to practice may be necessary to establish priority of invention. Technically an invention can still be completely conceptual as long as its best mode of operation is described in the patent application, although in practice it is difficult to describe the best mode unless you have reduced it to practice. An actual reduction to practice can be extremely useful to establish priority (e.g. building a prototype), as well as assist in attracting industry interest.

Inventorship

• What is meant by Inventorship?

Inventorship has a strict legal meaning under the laws and regulations of the U.S. patent system. Only those who have made independent, conceptual contributions to an invention are legal inventors. An inventor is one who, alone or with others, first produces or contrives, by use of ingenuity or imagination, a new and useful process, machine, composition of matter, manufacture or any new and useful improvement thereof that was previously unknown to mankind. If an invention involves more than one inventor, it is a joint invention; multiple inventors are called joint or co-inventors. Inventorship and authorship are not the same; co-authors may not necessarily be co-inventors.

• How is it determined who the inventor is?

Legal determination of Inventorship is made in relation to the patent claims. The test is whether a person has made an original, conceptual contribution to at least one of the claims of the patent. Only those who meet this test qualify as inventors. U.S. patent regulations require that only the true inventor(s) sign a patent application. To be a sole inventor, a person must be responsible for the conception of the invention as described in all the patent claims. Joint or co-Inventorship requires communication between the inventors, but it is not necessary for the inventive contributions to be of equal importance. The status of co-inventor cannot be granted merely as a reward for hard work or assistance. This means that students, research assistants, technicians and others, even though they may have gathered data or constructed a prototype, they are not inventors unless they have made an inventive contribution.

Laboratory Notebook

• What is a laboratory notebook?

A laboratory notebook is a written record of your research. The maintenance of a witnessed laboratory bound notebook is important. Conceptions, descriptions of how to achieve particular results, laboratory data and drawings should all be recorded daily on consecutively numbered pages. The entries should be in indelible ink. No erasures should be made (or possible, per the indelible ink); instead, draw a line through the text or data to be deleted and enter the material in corrected form. Initial the portion of the text that has been crossed out. Draw a line through any blank spaces on the page. All entries should be signed and dated by both the researcher and a witness at the time they are made. The witness should be someone who has read and can understand the material, but had nothing to do with producing it.

Why is a laboratory notebook important?

The U.S. grants patents to the "first to invent", not the "first to file" (as is common in foreign countries). Disputes sometimes arise over who was the first to make an invention, and records kept by the parties usually decide the issue. In the past disputes raged over who first invented the telephone, the laser, the electric light and the automobile and in all of these cases the availability of records or the lack of records played a deciding role.

• What constitutes a good Laboratory Notebook?

Your laboratory notebook should be:

- permanently bound with consecutively numbered pages;
- the entries should be legible and indelible;
- you should sign or initial, and date, the entries;
- the entries should be witnessed by someone who understands the technology but is not a co-inventor; and
- no erasures should be made but any text or data to be deleted should be ruled through and initialed, then the corrected material entered.

<u>License</u>

• What is a license?

A license is an agreement granting a company permission to use an invention for commercial purposes, subject to certain terms and conditions that include fair compensation to UNT based on the estimated value of the invention.

• What role does the inventor play in the licensing process? Does the inventor participate in the negotiating process?

The active collaboration of the inventor(s) is essential in the marketing and licensing process. Inventors can help determine the apparent value of the invention; proof marketing documents for accuracy; provide information on companies which they believe may be interested in the invention; work with the patent attorney in the preparation and prosecution of the invention; respond to companies technical questions on the invention and demonstrate its uses and advantages. However, although the inventor(s) are consulted and advised during the negotiating process, they are not usually directly involved in the negotiations.

 Is there a standard fee and terms for a license? No. License fees and royalty rates, and other terms and conditions, are determined on a caseby-case basis because every technology, and the circumstances of the proposed commercialization arrangement, are unique.

Are all license agreements similar?

No, different inventions require different licensing strategies. For example, an invention that requires significant investment of resources by the licensee for further development is normally licensed on an exclusive basis. This gives an incentive to the licensee to commit the risk capital investment required to bring the product to market. If it is a basic tool or device likely to be widely used, it would probably be licensed on a non-exclusive basis. Inventions can also be licensed by application, field of use or territory.

• May I license my own invention back from UNT?

Yes, if you (your company) can demonstrate that such a license would provide the best chance of commercialization for that technology and if potential conflicts of interest are manageable (see "Conflict of Interest").

What issues are covered in a license agreement?

The issues covered in a license agreement include:

- What is being licensed;
- Exclusivity or non-exclusivity of the license;
- Coverage of all uses of the invention or restrictions to specific applications and/or uses;
- Coverage of all regions or restriction to specific territory (e.g. USA);
- Consideration (up-front payments, royalties, benchmark payments, payment of patent costs, equity);
- Inclusion of the right to sub-license to another party;
- Ownership of improvements (this could affect any future work you may do in the field, and your rights to further developments);
- Performance benchmarks/criteria (investment requirements, time to market, sales, etc.);
- Governing law;
- Indemnification;
- Term of the license;
- Limitation of liability and
- Termination criteria.

• What is UNT's major aim when proposing a license agreement?

The goal in any negotiations is to enter into a license agreement that is fair and reasonable to both parties, and will ensure a long-term mutually rewarding relationship between the University and the

Licensee. Within the legal constraints imposed upon us, flexibility is the key word. Most licenses have circumstances that require special consideration. A few examples include the investment to be made by the Licensee to bring the invention to market, competitive technologies, whether the technology is a stand-alone invention or needs another technology to enable it to be utilized, and the patent position. If the Licensee is a start-up company, they normally cannot afford significant up-front payments, but can offer equity or payments to be made when certain benchmarks are attained.

What happens after a license agreement has been signed?

After execution of the License Agreement, regular contact is maintained with the Licensee and their performance, as well as adherence to the provisions of the license agreement, is monitored by UNT. In many cases, the Licensee will fund further research at UNT to help in further development of the technology and may also retain the inventor as a consultant. Income received from the Licensee, including any benefit derived from equity, is distributed in accordance with UNT's Intellectual Property policy. The share of income accruing to schools, departments or centers can only be used for research purposes. Often during the term of a license circumstances change and it may be necessary to amend the agreement to take into account new situations. For example, a new competitive technology may enter the market, drastically reducing the market share of the licensed technology; there may have been unforeseen problems in completing development of the product, thereby decreasing its cost effectiveness or some of the patent claims covering the invention may be disallowed, significantly decreasing the strength of the patent.

<u>Marketing</u>

• How does UNT find licensees?

Often the best sources for potential licensees are the inventors (according to national surveys 60% of licensees are introduced by the inventors) since they are likely to know about people and companies doing work related to the field they are inventing in. If they can identify one or more companies that may be interested, then UNT will identify other U.S companies working in the same field, and the key contacts in those companies. Once appropriate companies are identified, appropriate contacts are made with those companies. Of course, if the invention arose during the performance of industry sponsored research, the research contract may have granted the sponsor certain IP rights, in which case we may already have a probable licensee. Companies who express interest in the invention normally request an opportunity to evaluate the technology. This is done under a Non-Disclosure Agreement or possibly, if the company is particularly interested, under an Option Agreement (see "Option" under frequently asked questions). If strong interest has been shown, a draft license agreement will be submitted to the potential licensee as a basis for discussion.

• Why is University Licensing so Difficult?

The products of university research are usually not developed in response to market need, and are also usually embryonic – they haven't been demonstrated; the buyer can't touch the merchandise; often the inventor(s) can't define or detail its usefulness; and often we are not even sure it will work. Licensing from a university also involves risk to the licensee – investment in development; license fees; reorientation of internal resources and priorities; and, possibly, changes in manufacturing processes and products.



• What is a Mask Work?

Mask Work means a series of related images, however fixed or encoded, having or representing the predetermined, three dimensional pattern of metallic, insulating, or semiconductor material present or removed from the layers of a semiconductor chip product; and in which series the relation of the images to one another is that each image has the pattern of the surface of one form of the semiconductor chip product.

Materials Transfer Agreement

What is a Materials Transfer Agreement?

A "Materials Transfer Agreement" (MTA) is an agreement that provides that any materials being made available by one party to another are being made available for scientific work only and not for commercial use. No right of ownership or commercial use is transferred to the recipient of the materials.

Who processes Materials Transfer Agreements at UNT?

The Office of Research Services handles all Materials Transfer Agreements at UNT, whether those agreements are with an outside party is providing materials to UNT or those agreements covering materials being provided by a UNT employee to an outside party except for UNT owned IP which is the responsibility of the OTT.

Non-Disclosure Agreement

• Why are Non-Disclosure or Confidentiality Agreements necessary?

A Non-Disclosure is necessary before any proprietary information is disclosed from one party to another. Without this agreement, the party to whom the information is disclosed is free to use and transmit the information to others. This also protects the technology from public disclosure that could hurt the chances of getting a patent. Any information being passed on to another party must be identified as proprietary and any information conveyed orally should be confirmed in writing, once again marked "Proprietary." The Office of Research Services negotiates and executes all Non-Disclosure or Confidentiality Agreements for UNT faculty, staff, and students except for UNT owned IP which is the responsibility of the OTT.

• Can I sign a Non-Disclosure Agreement?

No, to be valid the document must be signed by a signatory authorized by the UNT Board of Regents after it has been reviewed by the Office of Research Services.

<u>Option</u>

What is an option?

An option is an agreement which grants a company, for consideration, an exclusive right for a limited period of time to evaluate the technology and/or negotiate a license on agreed upon terms and conditions.

• What is Know-How?

"Know-How" is knowledge of how to do something, or a faculty or skill for a particular thing. The "Know-How" may not be commonly known, it may be a unique skill of an individual and may not be readily identifiable by others. Know-How may not be protected but may be kept as a Trade Secret.

<u>Ownership</u>

 If I invent something at UNT does it belong to UNT? What about inventions I thought of and invented before I came to UNT or outside of UNT?

UNT's policies require that all potentially patentable inventions or copyrightable material, other than scholarly works, conceived or reduced to practice in whole or in part by members of the faculty, staff, or students of UNT in the course of UNT responsibilities, or with more than incidental use of UNT resources, be disclosed on a timely basis to OTT. Title to such intellectual property is assigned to UNT, regardless of the source of funding. What is pertinent regarding ownership is not the location you were at when the idea was conceptualized, but its relationship to your research or work at the University. If the idea grows out of your work or research or is developed with more than incidental use of UNT resources, or if it is an outgrowth of sponsored research (even if it did not use substantial UNT resources) then it belongs to the UNT. If you have been working on something in an outside collaboration it should be disclosed to OTT even if your collaborator offers to handle the invention. The employer of each inventor may have ownership in the invention. UNT will coordinate with other joint owners of inventions and will negotiate how the invention will be managed and any potential royalties shared.

 If I write a software program as my thesis can I license and distribute it myself, or does UNT own it?

UNT owns patentable and/or copyrightable software developed using UNT resources, software developed as work for hire, software that was commissioned by UNT and software developed under a sponsored project.

Patent

• What is a patent?

A patent is a grant from the Federal government that allows the patent owner to prevent others from practicing an invention for a limited period of time, in the case of U.S utility patents, 20 years from the date of the patent application. In return for the granting of the patent, the law stipulates that the invention be made public. Thus, by reading the patent, others are able to practice the invention if given a license by the patent owner. The owner has the right to prevent others from practicing the invention covered by a patent, but they may be inhibited from practicing it themselves if it infringes a dominating patent owned by another party. In that event they would need themselves to obtain a license from the other owner. To be patentable, an invention must meet three criteria – it must be novel, useful and not obvious, that is, non-obvious to someone of ordinary skill in the art.

• What rights do an issued patent give you?

A patent gives the owner the right to exclude others from making, using or selling an invention, covered by the patent, throughout the country which issued the patent for a limited period of time. In the USA this is 20 years from the date of the patent application. A patent does not automatically give the owner the right to practice the invention, since such action may infringe the claims of an earlier and still current patent.

What is included in a patent?

A patent has two parts: the specification, which is a narrative presentation of the invention,

including the prior art which preceded it, and must include the best mode of practicing the invention known by the inventor and the claims, which describe the essential elements of the invention. The specification starts by briefly describing the field of the invention. Then there is a background section that describes the work done in the past (prior art) and its shortcomings. All known prior art must be disclosed. If needed to aid in understanding the inventions, drawings are included. This is followed by a disclosure of the invention, setting forth in general terms what the inventor considers to be the invention and its advantages. Then the summary of the invention details the theory on which the invention rests and full details of the way the invention can be implemented. Each implementation is called an embodiment and the best one is the preferred embodiment of the invention. Next the industrial applicability section describes the applications in which the invention will be used. The claims circumscribe the legal bounds of the invention. They describe the essential elements of the invention, firstly as broadly as possible, and then more narrowly. Although it is generally easier to obtain a patent with narrow claims, if they are too narrow then others can possibly work around the patented invention.

• How is a patent obtained?

The filing and prosecution of patent applications with the USPTO is undertaken by outside patent attorney firms. Past experience in previous cases, technical competence, and possible inventor preferences, are considered by UNT when making the selection of the appropriate patent attorney. The inventor(s) cooperation is essential in patent filing and prosecution. The patent attorney will be knowledgeable in the general field of the invention, but they are unlikely to have the specific expertise of the inventor(s). The inventor(s) interaction with the attorney is essential to obtain meaningful patent protection.

Does UNT file patent applications on all disclosures it receives?

UNT does not file patent applications on all invention disclosures it receives due to the high cost of filing and prosecuting (\$10,000 - \$20,000). If we already have a commitment from a licensee or potential licensee to meet patent costs, we will proceed immediately with an application. In some cases, if the invention appears to have apparent commercial viability but this has not yet been confirmed, we will file a provisional patent application. This establishes a priority date and gives us a 12-month window in which to confirm the potential of the technology, during which time we can, if appropriate, seek market interest in the invention. In that case any potential licensee will be required to sign a confidentiality agreement before detailed information on the technology is disclosed to them. Any utility application must be filed within twelve months of the date of the provisional filing to preserve the priority date.

• How long does it take to get a patent?

Typically, there is a 24-36 month prosecution before allowance, with costs ranging from \$10,000 - \$20,000.

What is a provisional patent application?

A provisional application is a faster, less expensive application used to establish a priority date with the Patent Office. It is a way of postponing the cost and effort of preparing and filing a full or utility application, while the invention is being evaluated to determine whether to proceed with filing a full application. After filing a provisional patent, the applicant has one year to file a complete application and any foreign applications. It should be remembered that the provisional application will only establish a valid priority date if the claims of the later full application are supported by the earlier filed provisional application. If a full application is not filed within 12 months from the date of filing of the provisional application, the provisional application will lapse. In that case, the provisional application is not published or made available to the public by the Patent Office.

- How long is a patent valid? For new patents the term is 20 years from the date of filing.
- Apart from the obvious potential commercial benefit, and my personal benefit, what other benefits does patenting an invention derive?

Society as a whole benefits whenever important patented products become available (which may not have happened if the supplier did not have monopoly rights to the technology). When a patent issues, publication is mandatory, so the community benefits by learning about inventions through this publication process. From the researcher's perspective, an often-unrecognized feature of the patent system is that it is structured to encourage people to invent around the patent, to provide alternative solutions to the problem addressed by the invention. This attribute of the system often serves as a stimulant to make further inventions.

Patent Attorney

• What should I know about working with a patent attorney?

Cooperation between the patent attorney and inventor(s) is essential if a strong, effective patent is to be obtained. To prepare for the interview with the attorney you should collect and briefly summarize all relevant printed materials, publications and prior patents; prepare rough sketches, graphs and tables describing the invention; list all alternative ways you can think of as to how your invention can be implemented; draft a description of the preferred embodiment of the invention; prepare a description of the advantages and uses of the invention; and prepare a glossary of terms pertinent to the invention. Don't assume the patent attorney knows the subject matter in detail. During the interview develop the theory behind your invention from a very basic level; don't jump any steps; explain all possible embodiments and applications of the invention; have your files and any materials readily available; and if possible, show the attorney a physical embodiment of the invention.

• Why do I need to be prepared for and responsive to the patent attorney? Cooperation between the inventor(s) and the patent attorney is essential if a strong, effective patent is to be obtained. What you should also remember is that any lack of cooperation or failure to be responsive drives up the cost and reduces any subsequent "net income", which affects your share of that income. The services of a good patent attorney are worth the cost, but those services do not come cheaply. Attorney's fees can range from \$250 to \$400 per hour, so it is in your best interest, as well as that of UNT, to ensure that any time spent with the attorney, either in person or on the phone, is as productive as possible. You should also respond as quickly as possible to any communications from the attorney, whether during the preparation of the patent application or during its prosecution, such as responses to issues raised by the patent examiner.

How is a patent attorney selected? Do I have any input?

Past experience, technical competence, and possible inventor preferences are considered when selecting the appropriate patent attorney. UNT contracts with several outside law firms in order to have access to a broad range of expertise and experience. The cooperation of the inventor(s) is essential in patent filing and prosecution. The patent attorney will be knowledgeable in the general field of the invention, but they are unlikely to have the specific expertise of the inventor(s). The inventor(s) interaction with the attorney is essential to obtain meaningful patent protection.



What is patentability?

When UNT inquires about patentability, we are asking whether or not the invention is capable of being the subject of a valid patent.

• What are the requirements for patentability?

In order to be patentable, an invention must first be novel (i.e. new and original), must have a utility (a clear use), and it must be non-obvious. Even though it is new, it must not be obvious to one of ordinary skill in the field to which the invention applies.

• Why are the dates of conception and disclosure important?

The U.S. patent system is a "first to invent" system. The party that can prove they were the first to invent gets the rights to the patent. Keeping dated notes that others have witnessed, and other records, is potentially very important for patenting. The date of public disclosure is important because in the U.S. an inventor has one year from the date of disclosure in which to file a patent application. Once the invention has been publicly disclosed foreign patent rights are lost.

Patent Search

What is a patent (or patentability) search?

It is a search of existing patents and other publications to determine if the invention is new, novel and non-obvious, and, thus, potentially patentable.

• Why should I Do a Patent Search?

You believe that you have something that is new, novel, and non-obvious, and would like to see the invention protected by a patent. But before UNT can obtain a patent, several steps must be taken. Among these is performing a prior art search. As the inventor, you know your brainchild better than anyone else does - and that is why it is important for you to perform a prior art search to save money and headaches for all of us later on down the road. As a researcher, it is an excellent idea to perform prior art searches before and during your research project. This could be thought of as an extension of a literature search. It would be a shame to invest your and UNT's time and resources into trying to obtain a patent, only to find out someone else has come up with and disclosed a similar invention. If this were the case, then we cannot obtain a patent because your invention already exists. As well as helping you to verify that your invention or research is worth further time and resources, the search also helps UNT determine the potential value of your invention.

• How Do I Do a Patent Search?

Prior art searches can be done through several websites, but the only official website of the US Patent & Trademark Office (USPTO) is <u>www.uspto.gov</u>. It maintains the most up-to-date (updated every Tuesday) information on current US patents, and is an extremely useful tool to find out just how new, novel, and non-obvious your invention might be. There are several ways you can search the USPTO website. The most direct step is to click the "Patent" button off to the left side of the screen when you first get to the site's home page. This gives you a plethora of options, but the one concerned with patent searching is found directly under the category "Services" as "SEARCH Patents." From there you can select a "Quick Search" or an "Advanced Search." You then have the option of searching several ways for prior art. If you have the information you can find patents by means of patent number, or assignee (to find companies in the related field), title, claims, etc. To improve upon your results, you should search multiple fields including the "Claims" and "Title" for keywords that describe your invention, the "Assignee" for companies in the relevant industry, and the "Description/Specification" for main ideas. You may want to also consider searching the

"Patent Applications", as they are just as important as issued patents, to give a heads up on what may present a problem later. The broader your search, the better is our chance to avoid future problems.

The objective in searching for prior art is to try and find anything that could possibly relate to your invention or research. You should not assume that your invention is unlike anything else. It is a good idea to be very liberal in searching for similar technologies. It is not advisable to conveniently ignore any hits either because closely related prior art could lead to a rejection of our patent application or to later invalidation of the patent if already issued. On the other hand, that related prior art may help you develop new features that are not anticipated by the prior art and improve your invention. Also, keep in mind, as you read journals and periodicals, to look out for any related prior art. Remember, we are obligated to disclose to the USPTO any relevant prior art we have found. The more careful you are the better our chances of obtaining a patent and taking your invention to the next step.

• What other sites can I search for prior patents?

There are several other reputable web sites you can visit to search for prior art patents. These include:

- Delphion (<u>www.delphion.com</u>);
- A Singapore government site, which covers U.S. and some foreign patents, and publications (<u>www.surfip.gov.sg</u>).

Prior Art (also see "Background Technology")

• What is prior art?

Prior art is the total body of knowledge that teaches or anticipates the invention, or otherwise relates directly to the invention. It includes patents, publications, physical embodiments and visual presentations.

Publication

• What is publication?

Publication is any disclosure in a form that is readily accessible to or distributed to the public.

• Can I publish and still protect my work?

Yes, as long as you have submitted a disclosure to OTT and a provisional or utility patent application has been filed before you publish or divulge your invention. You can publish and protect the commercially valuable parts of your research by planning ahead, preparing and submitting a disclosure of your invention to OTT as early as possible and coordinating publication divulgation with patent filing.

Public Disclosure

What is considered a public disclosure of an invention?

Anything that is readily available to the public, such as a journal paper, a publication on the Web, a conference presentation, or a dissertation indexed at the library, which describes the idea in enough detail that someone else would be able to make and use the invention, is public disclosure. Showing or telling your new ideas may also constitute disclosure, including website postings and laboratory visits, as does selling or offering for sale a physical embodiment of the invention.

• Why should I be concerned about public disclosure?

Inventors should be aware that patent rights could be lost by Publication or Divulgation. Many are aware that there is a one year grace period following release of an enabling printed publication in which to file a U.S patent application, but this concession does not apply in foreign countries – any publication or divulgation closes the door on the possibility of obtaining foreign protection. Rights to a U.S patent are forfeited if an enabling printed publication is released more than one year prior to the time a U.S patent application is filed. Enabling means that the publication describes the invention in sufficient detail and specificity to enable a person of ordinary skill in that art at that time to make, construct and practice the invention without an unreasonable amount of experimentation. Divulgation, following which the rights to foreign patents are forfeited, is any non-confidential disclosure of the critical aspects or features of an invention where the critical features of the invention are readily discernable, or distributing samples where they could be discoverable by analysis, is divulgation.

• What if I want to discuss my invention with others, outside UNT, before UNT has filed a patent application?

Contact OTT. The person, or company, should sign a Non-Disclosure Agreement, agreeing to keep your invention in confidence, before you have any discussion.

• If I publish a paper or make an oral disclosure before UNT files a patent application, have we lost patent rights?

There is a one-year period from date of the public disclosure to file a U.S. patent, but foreign rights are lost immediately.

 Should I refrain from publishing a paper or making an oral public disclosure of an invention before UNT has filed for a patent? Yes! Call the Office of Technology Transfer if in doubt. Although we have the one-year grace period in which to file a U.S patent application, prior disclosures to OTT enables us to do a preliminary evaluation to determine if we should file a provisional application and thus protect our foreign patent rights.

Record Keeping (See "Laboratory Notebook")

<u>Right of First Refusal</u>

• What is a Right of First Refusal?

A right of first refusal is an agreement wherein a company is given the first right, for a limited period, to seek to negotiate a license for an invention. It does not set pre-determined terms and conditions and does not preclude us from seeking interest from other parties. However, if another party makes an appropriate proposal for license rights, then we must first offer the right of first refusal holder a license on the terms offered to us by the other party.

Royalties (See "Income")

Scholarly Works

• What are Scholarly Works?

Scholarly works are papers, articles, books, and other publications that are produced through individual effort and initiative and not as part of an assigned duty, and may be subject to copyright. UNT recognizes and encourages the publication of scholarly works as an integral

part of the processes of teaching and research, and does not claim title to such scholarly works.

Search See "Patent Search"

<u>Software</u>

What is Software?

Software is the collection of programs loaded externally that cause a computer to perform a desired operation or series of operations. It can be categorized in three groups; "Non-Technological Applications" software, "Component" software, and "Technological" software.

 What is "Non-Technological Application" software? Much of the software developed at UNT is not the object of a research project, but is written for use in teaching, administration, or other non-technological purpose. Educational software is probably the largest percentage of non-technological applications software.

• What is "Component" software?

Component software is part of a technological device or system that is developed as part of a research project, but is not the focus of the research itself. An example would be in a new imaging system, or a robotic system, where the software is a component of the overall system. Component software is commonplace, and is not the object of any invention, but a component of a larger system, device, equipment, or method.

What is "Technologic" software?

As the name implies, in this category the software is of a technologic nature, the object of technical innovation. This includes such things as network software, operating systems, electronic spreadsheets, database systems, word processing or email software, computer-aided design systems, artificial intelligence, file compression programs, and the like.

• Is Software considered an invention?

Sometimes. Copyright laws usually govern software but in some cases the ideas behind the software, that is the process, or series of steps performed to achieve a result, are patentable. A patentable invention may include software code.

- Should all Software that could be patented actually be patented? No, it should not be patented unless it is truly unique and has the potential to generate significant income.
- Are "Algorithms" patentable?

Yes, they can constitute the method that is patented. It is really only mathematical procedures and formulas that are not patentable by themselves, but they can be patented as part of a software system or method.

<u>Students</u>

• Are students subject to UNT's Intellectual Property Policy?

Yes, if any intellectual property is conceived or developed by a student during the performance of their course work, title to the intellectual property resides with UNT. Student inventors enjoy the same rights and benefits as do faculty and staff inventors.

<u>Technology</u>

What is Technology?

The World Intellectual Property Organization (WIPO) defines Technology as "systematic knowledge for the manufacture of a product, the application of a process or the rendering of a service, whether that knowledge be reflected in an invention, an industrial design, a utility model, or a new plant variety, or in technical information or skills, or in the services and assistance provided by experts for the design, installation, operation or maintenance of an industrial plant or for the management of an industrial or commercial enterprise or its activities."

Technology Transfer

• What is Technology Transfer?

Technology may be transmitted through the intangible process in which any body of knowledge is diffused, or it may be the subject of a specific communication, enshrined in a particular transaction. Technology transfer, in this latter sense, conventionally takes the form of an integrated sequence of commercial transactions. This sequence includes the grant or assignment of industrial property rights; the communication of technical know-how in a documentary form; and the communication of technical; or other know-how in a documentary form; and the communication of technical or other know-how in the supply of services. It is the grant of industrial property rights to which we are referring when we use the term, in a generic sense, of "technology licensing." In practice, we are referring to any means adopted for the commercialization of technology, whether it is licensing, joint venture, distribution or any other appropriate arrangement.

<u>Trademarks</u>

• What is a Trademark?

A trademark is any word, name, symbol or device used to identify the source or origin of goods or services and to distinguish those goods and services from others. Trade Secret

Trade Secret

• What is a Trade Secret?

A trade secret is business information which has been maintained confidential and which has value in the industry in that the information is not generally known and would be difficult to obtain by competitors. It includes technical or non-technical data, formulae, patterns, programs, devices, methods, techniques, drawings, processes, financial data, product plans, and customer or supplier information.