

Fundamentals of Intellectual Property For (Non-IP) In-House Counsel

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General Approach

- Refresher or quick intro framework for in-house counsel who are not IP specialists but who deal with IP in day-to-day work
- Acknowledging the local DC/NOVA economy, our discussion will lean toward IP in information technology and IT businesses
- First we'll outline key points to understand each species of IP
 - Focus on copyrights, patents and trade secrets, only brief discussion of trademarks
- Discuss sample scenarios and business cases

...to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

- U.S. Constitution, Article 1, Section 8

Copyright Basics

IP Fundamentals, Part 1

What is “a copyright”?

- Copyright is a creature of U.S. federal statute, 17 USC §101 et seq.
 - The federal statute preempts any state law that protects substantially similar rights. (17 USC 103)
 - Copyright is actually a bundle of rights that are held by the owner of the copyright regarding a *copyrighted work*.
 - Let's consider:
 - What kinds of things are the “subject matter” of copyright? What do copyrights cover?
 - When and how does a copyright apply to a work?
 - What are the rights held by the owner of a copyright?
 - Who owns a copyright?
 - How long does a copyright provide protection?
 - Why is a copyright valuable?

Idea vs Expression: The Subject Matter of Copyright

- Copyright protects the subject matter described in 17 USC 102-104:
 - Literary works, musical works, visual artwork, etc.
 - U.S. Government publications are NOT subject to copyright. (§ 104)
- “Idea” versus “Expression”
 - A copyright protects only a particular expression of an idea, but not the idea itself.
 - § 102 speaks of protection for “original works of authorship”
 - Example:
 - Idea: Hollywood loves the age old tale: Boy meets girl. They fall in love. Adversity happens. They overcome it and live happily ever after.
 - Copyrightable Expression: Aren’t there hundreds or thousands of movies that “embody” that idea, while each is a unique, original expression of it?
 - “When Harry Met Sally,” “The Notebook”, “Sweet Home Alabama”

When is copyright protection created?

- Common misconception: Contrary to popular belief, it is not necessary to register an original work in order to obtain a copyright covering the work.
- Tangible Medium: Copyright subsists in an original work from the instant that the work is fixed in a tangible medium. (§ 102)
 - Any sufficiently permanent medium “from which [the work] can be perceived, reproduced, or otherwise communicated.”
 - Why register? A copyright registration is a necessary precondition to bringing a lawsuit to enforce the copyright, either by seeking an injunction to stop infringement or to seek monetary damages resulting from infringement.

What is the copyright bundle?

- When a company owns a copyright covering a particular work, what does the company actually own?
- §106 provides the copyright owner the **EXCLUSIVE RIGHTS** to do or authorize the following:
 - (1) to **reproduce** the work
 - (2) to prepare **derivative works** based upon the copyrighted work
 - (3) to **distribute** copies
 - (4) to **publicly perform** (e.g., dramatic works, musical compositions)
 - (5) to **publicly display** (e.g., graphic works)
 - (6) to **digitally transmit** (applies to sound recordings)

Who owns the copyright?

- The original owner is generally the author of a work subject to copyright protection.
- Works-made-for-hire (as defined per §101):
 - In instances when an employee creates a work within the scope of her employment, the work is a “work-made-for-hire.” (Her employer is effectively considered the original author for purposes of copyright.)
 - Contractor engagements: Copyrightable work product is only a “work-made-for-hire” if expressly agreed pursuant to a written agreement.
- Title in a copyright may be transferred by a written instrument.
- Pieces of the copyright bundle may be owned/transferred separately:
 - *e.g.*, an artist may retain the right to publicly perform a work, while transferring title to the other rights (*e.g.*, the rights to reproduce and distribute copies)

How long does copyright last?

- Per §302:
 - General Rule: A copyright generally endures for the life of the author plus 70 years.
 - Works-made-for-hire: Unlike the general rule, a WMFH endures for 95 years from first publication, or 120 years from creation, whichever period first lapses.

What makes a copyright valuable?

- Because copyright law provides a copyright owner the **EXCLUSIVE** right to exercise the bundle of rights or to authorize others to do so, a copyright owner may set conditions for giving its permission – *e.g.*, charge a fee.
 - Whenever we grant permission to exercise a right in which the copyright owner holds exclusive rights, it is a “license.”
 - Companies make money by selling or renting copies of copyrighted items, or by licensing others to do so, or by licensing others (end users) to reproduce copies for their own use.
- Protection against competition:
 - Competitors who copy a protected work may be sued for damages, or for an order enjoining infringing use.

Fair Use: Do I really need permission?

- **Fair Use** – a potential defense against an infringement claim, where balancing of four (4) court-developed factors weighs in favor of the party claiming the benefit.
- Large body of case law has created multiple factors in determining applicability of the fair use doctrine:
 - **Nature of the work**
 - Court must weigh the artistic or creative content of the original work versus works that are better characterized as mere exposition of facts.
 - **Purpose and character of use**
 - Is the use commercial? Is it, e.g., parody or scholarly commentary?
 - Is the use “transformative” (More transformative uses weigh in favor of fair use.)
 - **Amount/Portion of use**
 - Unlicensed use of a greater portion of the original work may ordinarily weigh against a finding of fair use.
 - Even use of a small portion may negate fair use if copying the core or “heart” or most important portion.
 - **Value Impact** - Extent to which unlicensed use interferes in the market for the copyright owner’s work
 - i.e., Does the unlicensed use impact the value of the copyright for its owner?
- Fair use is NEVER a black-and-white determination, always fact-specific.
 - It is difficult to be completely assured of the availability of the defense in advance.
 - Fair use is often not a good basis on which to build a business model.

Copyrights: Let's pause and review...

Question #1

Is software source code subject to copyright protection?

Copyrights: Let's pause and review...

- Yes!
- Source code is a work of authorship for purposes of copyright
- Source code is an expression of instructions given to a computer, a particular expression of the programmer's ideas
- It is fixed in a tangible medium of expression (saved files)
- Thus software source code is capable of being copyrightable subject matter.
 - Advanced topic: The graphical user interface of software may be independently protectable by copyright.
 - Consider this scenario: Programmer 1 writes code that displays a creative, original UI. Programmer 2 writes new code that doesn't copy the first code in any way, but which does produce a UI that essentially duplicates the first. While the source code may differ, the second software may infringe copyrightable aspects of the first.

Copyrights: Let's pause and review...

Question #2

Are the algorithms/methods embodied by software code subject to copyright protection?

Copyrights: Let's pause and review...

- An algorithm is a concept, an idea about a series of steps or calculations to be performed in a particular sequence.
- There may be many ways to express a particular algorithm, and those expressions may be copyrightable.
- The algorithm underlying those various potential expressions, is, however, considered an abstract idea and therefore is not protectable by copyright.
 - Note: The algorithm may, however, be protectable as a trade secret, or may constitute a component of a patentable invention.

Copyrights: Let's pause and review...

Question #3

Are databases covered by copyright?

Copyrights: Let's pause and review...

- **Generally, no, a database is not protectable via copyright** where it is merely an aggregation of data that are not themselves independently subject to copyright.
 - Example: Consider a phonebook:
 - A collection of mere facts – names, addresses, etc. Facts themselves are not copyrightable subject matter.
 - The collection and alphabetical organization of directory listing does not constitute “original authorship”
 - See Feist v Rural Telephone, in which the Court found that some minimal level of creativity must be involved in order to apply copyright protection.
 - Note: A database of separately copyrightable subject matter (quotes, photos, etc.) *might* be independently protectable as a collection.
- Databases may, however, be protected in other ways:
 - The data may be protectable trade secrets.
 - The organization of the data (scheme) itself may be a trade secret.
 - Contractual terms may also provide broad protection.
 - International laws may provide protection based on principals of prohibiting unfair trade practices (e.g., “sweat of the brow” protections).

Copyrights: Let's pause and review...

Question #4

Consider the following scenario...

Copyrights: Let's pause and review...

- Sally has a great idea for a business. She'll write a program that scrapes the screens of multiple websites. She'll then distill the interesting material from all the scrapes and publish a curated collection of content on her own website, which she'll monetize via ads.
- When asked if this plan is acceptable under copyright law, she calls you, her favorite lawyers, and asks: "This is fair use, right?"

Is Sally's business plan protected by fair use?

Copyrights: Let's pause and review...

- ANSWER: It depends.
- Application of the multi-factor fair use analysis is required, and is highly fact-dependent.
- Scraped content may or may not be protected by copyright (*e.g.*, mere data, like the current weather conditions and/or temperature)
- Content may be subject to contractual terms prohibiting screen scraping (*e.g.*, online terms of use)
 - NOTE: Online terms are more clearly enforceable in Virginia and Maryland than many other jurisdictions due to UCITA.
- Content may be behind password gates, so that users must agree to treat the information confidentially (or not to republish it)

Patent Basics

IP Fundamentals, Part 2

What is “a patent”?

- Patents are creatures of U.S. federal statute, 35 USC §101 et seq.
 - “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”
 - Let’s consider:
 - What are the basic requirements for patentability?
 - How is a patent obtained?
 - What are the rights held by the owner of a patent?
 - Who owns a patent?
 - Why is a patent valuable?

What are the basic patenting criteria?

- Invention must have been:
 - “*Reduced to practice*” (actually embodied in tangible exemplars), or
 - “*Fully conceived*” (described in such detail that a practitioner in the same field could make or practice the invention)
- Invention must be novel, non-obvious and useful:
 - Novel: The invention must be new, not reflected in the “prior art.”
 - The invention must not have been discussed in publications, public speeches
 - Disclosures anywhere in the world matter for determination of “prior art”
 - 1-year grace period in the U.S. for disclosures by the inventor
 - Non-obvious: Context-specific – The invention must not be readily perceived or known to practitioners with expertise in the relevant field.
 - Useful: The invention must actually work and must have a purpose.
- Patents are not available for laws of nature or abstract ideas.

Can SOFTWARE be patented?

- Yes AND No?
 - Algorithms alone may be characterized as non-patentable *abstract ideas*.
 - Simply taking an algorithm and “requiring generic computer implementation fails to transform [an] abstract idea into a patent-eligible invention.” Alice v CLS Bank Int’l (2014)
 - Going forward post-Alice:
 - It will be insufficient simply to recite a set of functional steps to solve a problem.
 - Patent courts are looking for the claimed invention to provide an “inventive concept” beyond the abstract idea.
- But consider: 63.2% of the U.S. Patents issued in 2020 were software-related. (See [ipwatchdog.com](https://www.ipwatchdog.com), March 17, 2021)

How is a patent obtained?

- Detailed application filed with U.S. Patent and Trademark Office
 - Premise: The public will receive the benefit of a fully disclosed invention after the inventor receives a limited period of monopoly.
 - The application therefore fully discloses the invention, which is published (usually ~18 months after filing).
 - Important: Publication of the application eliminates any trade secret protection for the invention, insofar as the application discloses the secret.
- Provisional application may be filed, extending by up to 1-year date by which the full application must be filed, while preserving the benefit of the earlier filing date
- PTO review process often requires several years – multiple rounds of “office actions” (back-and-forth correspondence) until the claims are refined and “allowed” by the PTO.

What does a patent owner own?

- Patents do not provide “freedom to operate”!
 - Unlike a copyright, a patent does not grant a patent owner an exclusive right to *do* anything (not even a right to use the inventor’s own invention).
- Limited Monopoly for 20 years:
 - Enforceable once issued until the date which is 20 years after the application’s filing.
- A patent provides its owner the right to **EXCLUDE OTHERS** from
 - Making
 - Using
 - Selling (or offering for sale)
 - Importing

If the invention is a process, the patent enables the owner to exclude others from making, using or selling products made by that process.

Who owns the patent?

- Patent applications must be filed in the name of the individual inventor(s).
- Applications and issued patents may be assigned, and the assignment must be registered with the PTO.
 - Inventors are commonly subject to contractual duties to assign to employers.
- Note: There is no true “work-made-for-hire” doctrine similar to copyright law. (And note that WMFH clauses in contracts are generally effective only in relation to copyrightable subject matter.)

What makes a patent valuable?

- Commercialization: Like a copyright, a patent may be licensed.
 - By granting a license, the owner is granting the licensee permission to do something which the owner otherwise has a right to prevent – the making, the using, the selling, or the importing of the invention (or the practice of the patented method).
 - Not the same as a copyright license.
 - Copyright licenses promise right to exercise rights which the owner otherwise holds exclusively: The licensee may, e.g., reproduce, publish, distribute, etc.
 - Patent license isn't assurance of a right to practice, but a protection against suit by the owner.
 - A license may be conditioned on royalties or any other thing of value to the patent owner.
 - Defensive Uses of Patents:
 - Competitors in a field often have multiple patents infringed by one another.
 - Having a patent portfolio from which licenses can be traded is often a best defense (“If you sue me, then I’ll sue you.”)

Patents: Let's pause and review...

Question #1

John has an idea about a way to build a better mousetrap. He hasn't worked out all the details yet, but he would like to apply for a patent, now, before someone else beats him to it. Can he get a patent?

Patents: Let's pause and review...

- Answer: No
- From the perspective of patent law, John has not actually invented anything yet. He has neither “reduced to practice” nor “fully conceived” the invention, so it is not yet eligible/patentable subject matter.

Patents: Let's pause and review...

Question #2

Sheila is a brilliant mathematician. She had been studying encryption for years and has developed math formulas that will provide encryption stronger than any previously known. Her spouse declares “We’re gonna be rich, just as soon as you get a patent!” Can she patent her technology?

Patents: Let's pause and review...

- Answer: NO
- Reason: Math formulas are abstract ideas or laws of nature that are not patentable subject matter.

Patents: Let's pause and review...

Question #3

Sparky Enterprises is a driven start-up company with a very creative team of computer scientists. They have invented a new data storage technology that relies upon both inventive hardware and some highly creative software embedded within it. The company's products that rely on the technology are selling very profitably, in part because none of the company's potential competitors can figure out enough about the technology to enable the creation of competitive offerings. Sparky's management is trying to decide whether to apply for a patent, knowing that the patent application will need to describe how the hardware and software work together, including descriptions of the functions being performed by the software.

Should the company file a patent application?

Patents: Let's pause and review...

- Answer: It depends.
- Key considerations:
 - The software includes code that embodies algorithms that the company may be able to maintain as trade secrets.
 - Publication of the patent application would eliminate trade secret protection in the code.
 - Issuance of a patent is not assured, so loss of trade secret protection, without obtaining patent protection, would eliminate competitive advantage.
 - There is evidence that the product is difficult to reverse engineer, so trade secret coverage may be quite resilient.
 - The relative risks will need to be weighed as a business decision.

Trade Secrets

IP Fundamentals, Part 3

What are Trade Secrets?

- Information which...
 - Has value...
 - *Because...*
 - It is not generally known in the relevant market, AND
 - It is the subject of efforts to protect against unauthorized disclosure that are reasonable under the circumstances
 - *See the Uniform Trade Secret Act, §1*
- Examples:
 - Secret recipes and formulas
 - Non-public methods and algorithms – including software source code!
 - Non-public data or collections of data (customer lists, research data)

What does it mean to “own” a trade secret?

- A trade secret owner has a right against misappropriation:
- “Misappropriation” means:
 - Acquisition of a trade secret by *improper means*
 - Use or disclosure of a trade secret without express or implied consent
- “Improper Means” means:
 - Breach or inducement to breach of a duty to maintain secrecy (*e.g.*, NDA)
 - BUT: Reverse engineering of lawfully obtained subject matter is NOT misappropriation. (See extensive NCCUSL commentary to UTSA.)
- Independent Creation:
 - Multiple parties may claim rights in the same trade secret, independently created or obtained. No rights against one another.

Statutory Sources & Remedies

- Uniform Trade Secrets Act
 - Promulgated by NCCUSL, adopted by 48 States and DC (but not North Carolina or New York)
 - Provides state-based remedies via damages and/or injunction
- Defend Trade Secrets Act of 2016 (Pub.L. 114-153)
 - Federal statute, already enforced
 - Generally tracks the language of the UTSA
 - Provides access to federal courts for misappropriation claims where there is a nexus to interstate commerce
 - DOES NOT PREMPT UTSA, operates in parallel
 - Provides protections against misappropriation claims for whistleblowers

Trade Secrets are comparatively fragile.

- Trade secrets last until the information no longer qualifies under the definition:
 - Is it still valuable? Does it still have value as a result of not being known? Still protected?
- Trade secrets, once revealed publicly, may cease to be trade secrets.
- Thus many contracts involving trade secrets follow a “you break it, you buy it” philosophy – insisting that there be no cap on damages for misappropriation, plus recovery of attorneys’ fees to enforce confidentiality duties.
 - Side note: It may be difficult to provide “direct” damages flowing from breach of a contractual duty to maintain confidentiality of a trade secret. More commonly, damages from such breaches are fairly characterized as “indirect” or “consequential” damages.
 - Impact on approach to contractual limitations of liability?
- Failure to follow industry conventions may jeopardize a company’s ability to claim trade secrets:
 - Disclosures without first insisting on NDA protection?
 - Failures to employ reasonable information security?

Trade Secrets: Let's pause and review...

Question #1

Alpha, Inc. plans to enter a contract with Beta, Inc., pursuant to which Beta will develop some modifications and improvements to Alpha's proprietary software. To do its work, Beta will need access to the source code of Alpha's software. Since Alpha considers the source code of its software a trade secret, it asks Beta to sign an NDA before commencing work. Beta redlines the draft NDA so that all obligations under the NDA will sunset 3 years after the engagement ends.

Should Alpha agree to the redline?

Trade Secrets: Let's pause and review...

- Answer: It depends
- Considerations:
 - If Alpha can refrain from disclosure of particularly sensitive info, it might be willing to accept a sunset.
 - How long is the information likely to be valuable? If its value will endure, then longer protection should be sought.
 - Alpha may wish to eliminate the sunset on protection, or bifurcate the sunset, so that less-sensitive information is protected for a period of years, while trade secrets remain subject to confidentiality indefinitely (or until they are no longer protectable as trade secrets)
 - The parties may wish to spell out certain items that should always be assumed to be trade secrets, such as source code.

Trade Secrets: Let's pause and review...

Question #2

Licensor sends its standard software license over to a potential licensee/customer for review. The draft includes a clause that prohibits “reverse engineering” of licensor’s software. Licensee deletes that clause, among its several edits, arguing “It’s not against the law to reverse engineer!” Licensor’s eager sales engineer looks it up and confirms it to the weary in-house counsel: “They’re right! It’s not against the law, so we should stop including that clause in our contracts.” Too weary to fight, the attorney concedes and allows the deletion. A zealous techie employee of licensee later reverse engineers the source code and posts it to an online open source project. Does the licensor have any legal remedy?

Trade Secrets: Let's pause and review...

- Answer: It depends
- Considerations:
 - Was the source code really a trade secret?
 - Was it subject to reasonable efforts to protect its confidentiality?
 - Was failure to include a prohibition against reverse engineering a factor in assessing “reasonable efforts to protect”?
 - One published, the code may or may not retain trade secret coverage.
 - How widely was it published? To whom?
 - Whether or not the contract prohibited reverse engineering, the source code may have remained subject to confidentiality obligations, rendering publication a breach.
 - The code may also have been protectable by copyright, rendering the publication an infringement.
 - What are the actual damages? Does the contract limit or prevent recovery of damages of that sort?

The One-Slide Basics of Trademarks

IP Fundamentals, Part 4

Quick Excursion Into Trademarks

- First party to use a particular mark within a state will have state-based rights.
- Federal registration required to obtain federal rights.
- Similar/Identical marks may coexist when used in different markets:
 - e.g., Delta Airlines vs Delta faucets vs Delta power tools
- Trademark rights may lapse if not enforced.
- Trademarks provide an indication of origin or source (and thereby implied information regarding quality).
- One may not use another mark to falsely designate origin (“passing off”)
- Without a license, the mark of another may not be used to indicate...
 - Affiliation
 - Sponsorship
 - Endorsement

Exercise: An All-IP Scenario

IP Fundamentals, “Final Exam”

Bob has always been a weather enthusiast. He just finds the weather so very interesting. Fresh out of his MBA program at GW (Loudoun Campus), and armed with the programming skills he learned as an undergrad at George Mason, Bob has an idea for a new business. He first creates version 1.0 of a very creative software program that analyzes weather patterns and provides insights. He calls it “eWeather.”

The software looks promising, so he forms a company and immediately calls Jenny, his old friend who is a better programmer than Bob, asking her to help take eWeather to the next level. As a skilled programmer living in the DMV, Jenny already has an excellent, high-paying day job, but she agrees to help out nights and weekends if Bob promises to give her some stock when he gets rich one day. She tells Bob that any code she writes can be a work made for hire.

Bob's friends and family have provided some early investment, so Bob also has enough capital to hire Michael as the company's first employee. Together, Michael and Bob collect historical weather data from thousands of public sources and build a structured database which organizes all the data in an innovative way so that eWeather can better analyze it. A brilliant data analyst, Michael soon concludes that, given enough historical data, he can write an algorithm that will predict weather patterns more accurately than ever before! He writes the algorithm. Jenny writes new updates to eWeather to incorporate the algorithm. Bob hires a lawyer to file a patent application.

The company begins selling the software to customers around the country, primarily local TV stations wanting to provide better weather forecasts and meteorology students at universities. One copy of the software and one copy of the database are provided to each customer, subject to a click-thru license agreement which states, in part, “You acknowledge that the eWeather software and associated database are subject to copyright.”

Before long a meteorology student, struggling to pay tuition, takes the database and puts it online so that his friends, who also struggle with the high costs of school, don't have to pay for their copies of eWeather. Bob's lawyer sends a nasty letter to the student, demanding that the database be removed from the online site and demanding a list of all the persons who have downloaded copies (who now number in the thousands). The student promptly ignores the letter.

While the patent application is still pending and the dispute is brewing, a local billionaire decides to invest \$10B in Bob's new company. The billionaire's sharp attorneys, veterans of the ACC's 2021 "IP Fundamentals" CLE session, commence due diligence.

After hearing Bob's story, what are the lawyer's key IP-related questions?

Final Exam: Key Considerations...

- Bob created eWeather 1.0 before his company was formed. He is the author and original owner of the copyrights and trade secrets in the software.
 - Did he ever contribute those IP rights into the company?
 - What right does the company have regarding that IP?
- Did Bob or the company ever register copyrights in the software?
- Was the use of the eWeather trademark ever evaluated? Does anyone else use that trademark?

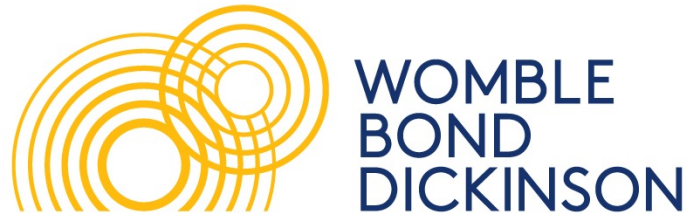
Final Exam: Key Considerations...

- Did Bob and Jenny ever document their agreement? Absent a writing, her “telling” Bob that her work product can be a work-made-for-hire is ineffective. Does Jenny still own the IP in her improvements to the software? What rights does the Company have in those improvements?
- Michael is an employee, so copyrightable work product that he creates within the scope of his employment is a WMFH - the company owns it. Is the database created by Michael and Bob copyrightable?
- While the data collected by Michael and Bob were “publicly” available, did they have the right to collect those data? Was any portion of the data subject to contractual restrictions? Available behind a password-protected paywall and subject to confidentiality obligations? Was any portion of the “data” actually subject to copyright (i.e., more than mere facts)?
 - Were any of the data taken from federal government publications (which wouldn’t be covered by copyright)?

Final Exam: Key Considerations...

- Was Michael's invention patentable, or merely a non-patentable abstract idea/algorithm? Might the algorithm have been protectable as a trade secret? Will the patent application undermine that protection?
- Does the EULA's acknowledgment of copyright protection create protection where the law doesn't?
- Even if the database was covered by copyright, is the student's post protected by the fair use doctrine?
- If the database was not copyrightable, what other rights might Bob's company have? Contractual damages? Injunction?
 - We can infer that the meteorology student has only modest financial means – he's struggling to pay for school. Would it be a waste of time/effort to sue him for damages?

Discussion/Questions



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