INTELLECTUAL PROPERTY WEBINAR MARCH 24, 2020 – 9:00 A.M. – NOON VIDEO CONFERENCE ONLY

AGENDA

Copyrights for Attorneys: What You Need to Know Marian Armour-Gemman, WVU Trademark Librarian

Intellectual Property Panel Discussion Mikal-Ellen Suzuki Bennett; Robert Bandy; Kevin Levine

Getting Registered as a Patent Attorney with the USPTO Mikal-Ellen Suzuki Bennett, Registered Patent Attorney

Copyright for Consumers and their Attorneys

Marian Armour-Gemmen

West Virginia University Libraries

24 March 2020 West Virginia State Bar



Outline

- What is Copyright
- Copyright Coverage
- Reusing Content
- Copyright Office Webpage
- Fair Use
- Fair Use Review



Types of Intellectual Property

Trade Secret

 Something which has economic value because it is not generally known or easily discoverable by observation and for which efforts have been made to maintain secrecy

Trademarks

 A word, name, symbol, or device that is used in trade with goods to indicate the source of goods and to distinguish them from the goods of others.

Patents

 A property right granted to an inventor to exclude others from making, using, offering for sale, or selling the invention

Copyright

 A form of protection provided to authors of 'original works of authorship' including literary...and certain other intellectual works, both published and unpublished.



Copyright ©

- "A form of protection provided to authors of 'original works of authorship' including literary...and certain other intellectual works, both published and unpublished."
- Exclusive right to reproduce the copyrighted work, prepare derivative works, and to distribute copies (among other things).
- Currently a work does not have to be registered to be protected. But you cannot bring suit unless the work is registered.



Copyright ©

- Copyright protects form of expression rather than the subject matter of the writing.
- For example, a description of a machine could be copyrighted, but this would only prevent others from copying the description; it would not prevent others from writing a description of their own or from making and using the machine.



Three basic requirements to qualify for copyright protection:

- Original: independently created (not copied from something else); does not have to be novel, unique, imaginative or inventive
- Creative: at least a small amount of creativity (not a list of facts)
- Fixed: fixed in a tangible medium of expression



Copyright Covers

- 1. Literary works (books, magazines, web pages)
- 2. Musical works (songs, musical plays)
- 3. Dramatic works (plays, dramatic readings)
- 4. Pantomimes and choreographic works
- 5. Pictorial, graphic, and sculptural works (paintings, photographs, cartoon characters, maps, technical drawings, boat hull designs)
- 6. Motion pictures and other audiovisual works (films, videos, slides)
- 7. Sound recordings (discs, tapes, records)
- 8. Architectural works (building design, blueprints)



Copyright Does Not Cover

- Ideas
- Procedures
- Processes
- Systems
- Methods
- Concepts
- Discoveries

- Facts
- Names, Titles,
 Short Phrases
- Typefaces
- Blank forms
- Familiar Symbols& Designs



More on Copyright

- Protects the expressive content not the underlying thoughts or ideas
- Must have a "spark" of creativity
- Must be a fixed work that you can see or hear.
- It does not need to be permanent, but cannot be short or transitory
- Cannot be an improvised performance that has not been written down or recorded



Copyright ©

- Currently a work does not have to be registered to be protected. But you cannot bring suit unless the work is registered.
- Exclusive right to reproduce the copyrighted work, prepare derivative works, to publically display, and to distribute copies (among other things).



Copyright ©

Term of copyright

For Works Originally Created on or after January 1, 1978:

- Life plus an additional 70 years after the author's death.
- For works made for hire, 95 years from publication or 120 years from creation, whichever is shorter.



Basic Registration Fees

- Each registration must include a properly completed application form, a nonrefundable filing fee, and a nonreturnable deposit.
 - \$35 Single Application Electronic registration through eCO
 - \$55 Standard Application through eCO
 - \$85 Registration on Form TX, Form VA, Form PA, Form SE, and Form SR (available by regular mail only)



Review: Three basic requirements to qualify for copyright protection:

- Original: independently created (not copied from something else); does not have to be novel, unique, imaginative or inventive
- **Creative:** at least a small amount of creativity (not a list of facts)
- Fixed: fixed in a tangible medium of expression



Worksheet: Is this covered by Copyright?



Is It Copyrightable?

- The email you sent to your grandparents.
- Your amazing sunset photo you uploaded to Instagram.
- The idea you verbalized during a Chamber of Commerce brainstorming session.
- The tweet you posted explaining your position on the rising cost of toilet paper.



References:

- Instagram Terms of Use
- https://about.instagram.com/blog/announcements /instagram-community-terms-of-use-faqs/
- Works Made for Hire, Circular 9
- https://www.copyright.gov/circs/circ09.pdf
- Twitter and Copyright
- https://copyrightalliance.org/ca faq post/tweetprotected-copyright/



Reusing Content



Options for reusing content:

- 1. Get permission from copyright owner
- 2. Obtain a license
- 3. Employ Fair Use
- 4. Use Public Domain content
- 5. Use publicly-licensed content



Licensing

- Copyright owner gives permission for specific use, for a fee.
- Creative Commons gives open permission to use works without a fee
 - Different levels of CC licenses http://creativecommons.org/



Licenses

Compulsory (copyright holder may not have to be consulted)

- Mechanical License to record and distribute a song you don't hold the copyright to and isn't in the public domain (Harry Fox Agency)
- Synchronization License to include music you don't hold the copyright to and isn't in the public domain in an audio-video work
- Public Performance License (ASCAP, BMI, SESAC)



Centralize Permission

- Copyright Clearance Center
- Art Resource
- Bridgeman Images
- WATCH = Writers Artists and their Copyright Holders



Creative Commons

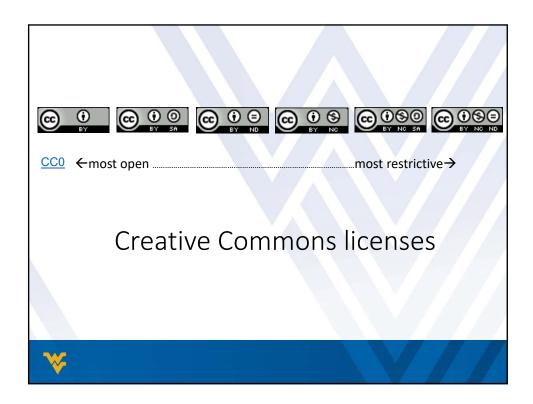
A non-profit organization.

One of their goals is to: provide <u>Creative</u> <u>Commons licenses</u> and <u>public domain tools</u> that give every person and organization in the world a free, simple, and standardized way to grant copyright permissions for creative and academic works; ensure proper attribution; and allow others to copy, distribute, and make use of those works

Creative Commons, "About"







Copyright Office

www.copyright.gov

- U.S. Copyright office is a separate federal department within the Library of Congress, run by the Register of Copyrights.
- Works that are deposited are sent to the Library of Congress for its collections.
- Mission: The U.S. Copyright Office promotes creativity and free expression by administering the nation's copyright laws and by providing impartial expert advice on copyright law and policy for the benefit of all.



Copyright Office Webpage

https://www.copyright.gov/



Primary Legal Resources

- Register → Record → Research
- Copyright Law of the U.S. (Title 17)
- Code of Federal Regulations (Title 37, Chapter II)
- Compendium of U.S. Copyright Office Practices
- Fair Use Index
- Archive of Briefs and Legal Opinions

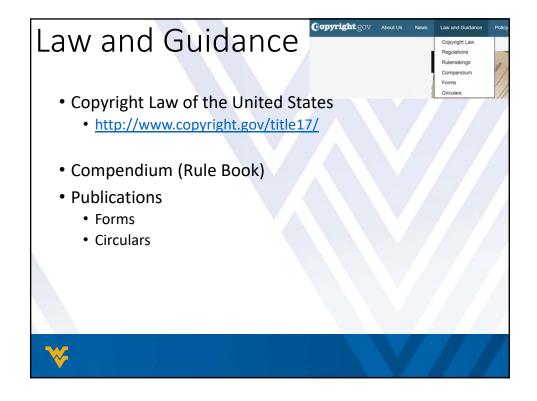


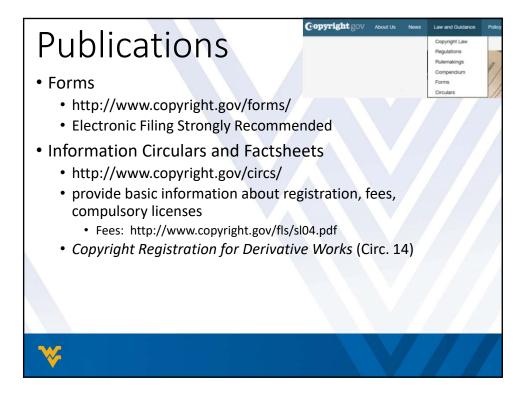
Helpful Items

- Schedule of Fees
- Learning Engine Video Series
- Circulars
- Forms
- Search Copyright Records















Fair Use



Fair Use

"A reasonable and limited use of a copyrighted work without the author's permission, such as quoting from a book in a book review or using parts of it in a parody."

--Black's Law Dictionary, 2004.



Fair Use

- Decided on a Case by Case basis
- Basic Concepts
 - No Formula
 - Cannot just declare, I think this is fair use
- Can always ask permission when in doubt
- Copyright Office has a Fair Use Index
 - List of court decisions
 - Can sort by topic



Four Factors for Fair Use

- 1. the purpose and character of the use
- 2. the nature of the copyrighted work
- 3. the amount and substantiality of the portion used
- 4. the effect of the use upon the potential market for or value of the copyrighted work



Purpose & Character of the Use

Favoring Fair Use

- Teaching (including multiple copies for classroom use)
- Research
- · Scholarship
- · Nonprofit educational institution
- Criticism
- Commentary
- · News reporting
- Transformative or productive use (changes the work for new utility)
- Restricted access (to students or other appropriate group)
- Parody

Opposing Fair Use

- Commercial Activity
- Profiting from the use
- Entertainment
- Bad-faith behavior
- Denying credit to original author
- Non-transformative use, verbatim/exact copy



https://copyright.columbia.edu/

Nature of the Copyrighted Work

Favoring Fair Use

- Published work
- Factual or nonfiction based
- Important to favored educational objectives
- Non-consumable work

Opposing Fair Use

- Unpublished work
- Highly creative work (art, music, novels, films, plays)
- Fiction
- Consumable (i.e. workbook, test)
- Work made for the educational market (i.e. casebook)



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Amount of the Portion Used

Favoring Fair Use

- Small portion of work
- Portion used is not central or significant to entire work
- Amount is appropriate for favored educational purpose

Opposing Fair Use

- Large portion or whole work used
- Portion used is central to or <u>"heart of the</u> <u>work"</u>



https://copyright.columbia.edu/

Effect on the potential market

Favoring Fair Use

- User owns lawfully purchased or acquired copy of original work
- One or few copies made
- No significant effect on the market or potential market for copyright work
- Lack of licensing mechanism

Opposing Fair Use

- · Could replace sale of copyright work
- Significantly impairs market or potential market for copyrighted work or derivative
- Reasonably available licensing mechanism for use of the copyrighted work
- Affordable permission available for using work
- Numerous copies made
- You made it accessible on the Web or in another public forum
- Repeated or long-term use



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Fair Use Review



True or False

- Kathy downloaded a few photos of local organic farms from Flickr.com's Creative Commons (CC) pool. She follows the rules of the photographer's specific CC license and uses them in her digital video about sustainable agriculture. That's OK.
- **True.** Kathy can legally use the photos as long as she follows the rules of the license.



True or False

Since Richard forgot to register his screenplay before he sent it out to agents for review, he's no longer eligible to copyright it.



True or False

Sam buys an mp3 from iTunes, then decides he doesn't like it, so he resells the mp3 to his friend.

This is legal, right?



True or False

Biff has designed mugs with a dramatic bridge photograph and plans to sell them to raise money for Engineers without Borders.

The photo came from Getty Images.

Biff isn't worried about the watermark, since he can easily Photoshop that out.

Is this fair use?



True or False

Adam recorded a video for his YouTube channel about the upcoming Senate elections and includes an official photo taken by a government employee and four bills authored by the incumbent that Adam found on the Senate's website.

That's copyright infringement.

False. Works produced by the U.S. government, or any U.S. government agency, are in the public domain. The texts of legal cases and statutes produced by the federal government are also in the public domain. However, the work needs to be cited.



True or False

Justin downloaded the black-and-white horror classic *Night of the Living Dead* from the Internet Archive and decided to mix an audio sample from the film into one of his original songs.

That's copyright infringement.

False. The copyright for Night of the Living Dead is part of the wonderful wealth of the public domain. Justin is free to be as creative as he wants with public domain material.



Fair Use?

Nadine wanted to include video clips from the Olympics illustrating the importance of photo finish. She will only use about 15 seconds from each race. Can she do this?

- •Is it transformative?
- •How much of each original video is she using?
- •What is the purpose of the video?



How Great is the Risk?

A student finds a table of statistical formulas in an online textbook and wants to include the table in a class assignment.

X	1	2	3	4	5
1	1	2	3	4	5
2	2	4	6	8	10
3	3	6	9	12	15
4	4	8	12	16	20



1) Is the table protected by copyright?

- Original: independently created (not copied from something else); does not have to be novel, unique, imaginative or inventive
- Creative: at least a small amount of creativity (not a list of facts)
- Fixed: fixed in a tangible medium of expression

2) Is the proposed use covered by Fair Use or one of the Special Exceptions?

- 1. the purpose and character of the use
- 2. the nature of the copyrighted work
- 3. the amount and substantiality of the portion used
- the effect of the use upon the potential market for or value of the copyrighted work



Questions?

Marian Armour-Gemmen

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References

Center for Social Media. 2008. "Code of Best Practices in Fair Use for Online Video." http://centerforsocialmediaorg/remix

Fishman, Stephen. 2006. *The Copyright Handbook.* What Every Writer Needs to Know, 9th ed. Berkeley, CA: Nolo Press. Book.

Electronic Frontier Foundation. "Teaching Copyright. Copyright Frequently Asked Questions." Web. http://www.teachingcopyright.org/handout/copyright-faq



ROBERT L. BANDY

Attorney at Law

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Charleston, West Virginia 25301

Phone: (304) 345-8900 Fax: (304) 345-8909

E-Mail Address: rbandy@kaycasto.com

I. PROFESSIONAL QUALIFICATIONS:

Admitted to practice before the West Virginia Supreme Court of Appeals, and The United States District Court for the Southern and Northern Districts of West Virginia.

II. PROFESSIONAL EXPERIENCE:

Member, Kay Casto & Chaney PLLC

1997 to Present

Concentrating on Creditor Rights, including commercial and consumer litigation, bankruptcy proceedings, foreclosures, eviction, landlord-tenant, and real estate transactional work; Intellectual Property, including trademark clearance and registration, and copyright issues; currently the Chair of the West Virginia State Bar Intellectual Property Law Committee.

III. EDUCATION:

West Virginia State University

1991

Bachelor of Science in Communications

West Virginia University College of Law

1997

Doctor of Jurisprudence

IV. SEMINARS (Speaker)

National Business Institute:

Collection Law From Start to Finish - June 14, 2016

Advising Creditors During Foreclosure and Repossession Actions – October 3, 2006 West Virginia Collection Law from Start to Finish – November 30, 2005;

Fundamentals of Bankruptcy Law and Procedure in West Virginia – October 2002;

Sterling Education Services:

Landlord Tenant Law – January 15, 2013;

Landlord Tenant Law Update - October 6, 2010;

Basic Bankruptcy – August 22, 2002;

Lorman Education Services:

Understanding The Bankruptcy Reform Act of 2005 – February 17, 2006; **Foreclosure and Repossession in West Virginia** – November 30, 2004;

West Virginia State University Economic Development Center – **Entertainment/IP Law 101** – March 15, 2013;

West Virginia Continuing Legal Education – **Emerging Issues Under The New Bankruptcy Law**, Issues From a Creditor's Perspective in Chapter 13 – May 26, 2006;

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V. MEMBERSHIPS:

American Bar Association West Virginia State Bar Chair, Intellectual Property Law Committee Kanawha County Bar Association

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EDUCATION

1999-2002

Doctor of Jurisprudence, Morgantown, WV, West Virginia University College of Law

- ·Top 25% of graduating class.
- Executive Research Editor, West Virginia Law Review (Vol. 104) (Fall 2001 Spring 2002).
- · Student Work, Music Distribution Via the Internet: Is It a "Platinum" Idea or a "One Hit Wonder"? published at 104 W. Va. L. Rev. 209 (Fall 2001).
- · West Virginia Law Review (Vol. 103) (Fall 2000 Spring 2001).
- · First Prize at WVU College of Law, ASCAP Nathan Burkan Memorial Competition for entry titled, The Audio Home Recording Act of 1992.
- · Teaching Assistant, Legal Research and Writing Department.
- · CALI Excellence for the Future Award Legal Research and Writing and Business Torts.
- · Marlyn E. Lugar Trial Association.
- · Who's Who Among American Law Students.
- · Various WVU Jazz Ensembles (drums).

1994-1996

Master of Business Administration, Huntington, WV, Marshall University

- · Student investment club portfolio management committee.
- · "12 O'Clock" Jazz Ensemble (drums).
- · Maintained full-time managerial employment throughout graduate school.

1989-1993

Bachelor of Business Administration – Marketing, Huntington, WV, Marshall University

- · Magna Cum Laude graduate.
- · Honors Program (English).
- · Dean's List every semester.
- \cdot "12 O'Clock" Jazz Ensemble (drums), Marching Band (snare drum), and Percussion Ensemble.
- · Student Member, International Association of Jazz Educators (IAJE).
- · Student Member, Percussive Arts Society (PAS).
- · Who's Who Among American Universities & Colleges (1992 1993).
- · Vice President, Tau Kappa Epsilon Fraternity, BN Chapter (1991 1993).

2004-2005

Specialist Certificate – Music Business, Boston, MA, Berklee College of Music – Berkleemusic Extension School

· 4.00 GPA.

Spring 2018-Present

Adjunct Instructor, Huntington, WV, Marshall University College of Business Courses taught:

- · LE 366 Entrepreneurial Law & Ethics: Legal and ethical issues involving the creation, maintenance, and expansion of small businesses.
- MGT 461 New Venture Dynamics: Fundamentals of entrepreneurship, including issues and challenges that new ventures face during business planning and entry.
- MKT 340 Principles of Marketing: Introduction to marketing as the central activity in creating exchanges with customers. Focuses on strategies related to environmental opportunities and threats using product, price, promotion, and distribution tools.
- MKT 511 Marketing and Management: Fundamentals of marketing and management for students entering the MBA program.
- MUS 327 Introduction to Music Business: A study of the intersection of music and business aimed at developing foundational skills and an understanding of the structure of the music business.

2016-Present

Founder/Managing Member, Nashville, TN, L. Kevin Levine, PLLC

- · Practice areas include entertainment, copyright, trademark, and business.
- · Provide counsel and assistance to companies and individuals in Tennessee and West Virginia with business planning, name selection and brand development, business formation (including complex "series" limited liability companies and other multi-level structures comprised of multiple owners, managers, and directors), day-to-day business transactions, mergers and acquisitions, intellectual property valuations, intellectual property licensing, business dissolution, and other matters.
- Provide general counsel and quasi personal management services to entertainment clients, including recording artists, songwriters, record labels, music publishers, touring and merchandise companies, music producers, personal managers, business managers, recording studios, independent filmmakers, screenwriters, literary authors, and visual artists.
- · Counsel clients in diverse industries on trademark and service mark selection, clearance, registration, licensing, transfer, maintenance, and protection issues.

2013-2016

Co-Founder/Member, Nashville, TN, DeSalvo & Levine PLLC

- · Practice areas included entertainment, copyright, trademark, and business.
- · Firm marketing manager.

2002-2013

Associate/Special Counsel, Charleston, WV, Kay Casto & Chaney PLLC

- · Founder/Chair of firm entertainment practice group.
- · Firm marketing committee.
- · Legal practice areas included entertainment, intellectual property, employment, general civil defense, and insurance defense.

1993-1999

Director of Sales and Marketing, Huntington, WV, The Pied Piper, Inc.

· Managed corporate marketing activities.

- Developed and conducted sales training programs across five locations in two states.
- Supervised advertising department and assisted with campaign planning, media purchasing, and creative development.
- · Designed and maintained corporate website.
- Worked with corporate management team to develop annual budgets for merchandise buyers.
- · Oversaw development and growth of custom home audio, video, and automation design and installation division.

1997-2004 Founder/Managing Member, Huntington, WV, LKL Properties Unlimited, LLC

· Managed portfolio of residential rental property.

1990-1993 Retail Sales Consultant, Huntington, WV, The Pied Piper, Inc.

· Assisted clients in home and car audio/video sales and system design.

PEER RECOGNITION

- · Martindale-Hubbell Rating: Distinguished.
- · Avvo Rating: Excellent/Featured Attorney for Entertainment.

LECTURES AND SPEAKING ENGAGEMENTS

Frequent speaker and guest lecturer on a variety of legal and business topics, including entertainment, copyright, trademark, business formation, and entrepreneurship.

Partial list of recent speaking engagements:

- · Presenter, National Business Institute *LLCs From Start to Finish* Continuing Legal Education Seminar, "How to Draft the LLC Operating Agreement" and "LLC Formation and Operation Process, Procedures, and Pitfalls" August 6, 2018.
- · Guest Lecturer, Marshall University College of Music, "Common Issues in Music Releases" April 25, 2018.
- · Guest Lecturer, Marshall University College of Music, "Copyright 101" April 25, 2018.
- · Panelist, Marshall University, "Copyright Fair Use" March 14, 2018.
- · Presenter, Marshall University College of Business Startup Weekend, "Entrepreneurship" November 4, 2017.
- · Guest Lecturer, Marshall University College of Music, "Music Copyrights" April 25, 2017.
- · Guest Lecturer, Marshall University College of Music, "Music Copyrights" November 29, 2016.
- · Presenter, Tennessee Attorneys Memo Tennessee Business Law Conference, "Creative Practices for Handling Business Disputes" May 20, 2016.
- · Guest Lecturer, Marshall University College of Music, "Music Copyrights" April 12, 2016.
- · Guest Lecturer, Marshall University College of Music, "Music Copyrights" December 8, 2015.

- Presenter, Nashville Bar Association Intellectual Property Committee Meeting,
 "Trademark Considerations for Musical Artists" November 16, 2015.
- · Presenter, National Business Institute Top LLC Mistakes in Everyday Business Practices Continuing Legal Education Seminar, "Single Member Limited Liability Companies," "LLC Veil Piercing: Mistakes Made in Everyday Practice that Expose Personal Liability," and "Disputes in the LLC: What Not to Do When the Love is Gone" June 9, 2015.
- Presenter, National Business Institute Resolving Business Disputes Continuing Legal Education Seminar, "Role of Insurance Policies in Business Disputes" and "Creative Practices for Handling Business Disputes" April 21, 2015.
- · Guest Lecturer, Marshall University, "Copyright and Film Clearance Basics" March 31, 2015.
- · Presenter, Nashville Songwriters Association International, "Copyright and Co-Writing" March 30, 2015.
- · Guest Lecturer, Marshall University, "Copyright, Trademark, and Film Clearance Basics" October 30, 2014.
- Presenter, Nashville Songwriters Association International, "Mind Your Own Business" (Developing Effective Business Practices for Songwriting) – May 21, 2014.
- · Presenter, Tennessee Attorneys Memo Continuing Legal Education Seminar, "Cloud Computing: Get Your Head in the Cloud" May 9, 2014.
- · Guest Lecturer, Marshall University College of Music, "Music Copyrights" December 3, 2013.

PROFESSIONAL LICENSES & ASSOCIATIONS

- · Licensed Attorney:
 - · Tennessee.
 - · West Virginia.
 - · U.S. District Court for the Middle District of Tennessee.
 - · U.S. District Court for the Southern District of West Virginia.
 - · U.S. District Court for the Northern District of West Virginia.
- · Tennessee Bar Association (Entertainment & Sports Law Section).
- · West Virginia State Bar (Intellectual Property Committee).
- · ASCAP Member Writer.
- · Aircraft Owners and Pilots Association.
- · Past Member, American Inn of Court Judge John A. Field, Jr. Chapter.
- · Past Coordinator, Nashville Songwriters Association International (NSAI) Charleston, WV Chapter.
- · Past Member and Trustee, Appalachian Association of Professional Musicians (American Federation of Musicians Local 136), Charleston, WV.

SKILLS & ABILITIES

- · Experienced public speaker.
- · Proficient Macintosh and Windows user.
- · Proficient Westlaw and Lexis user.
- · Experienced Avid Pro Tools user.
- \cdot Skilled in various Macintosh and Windows applications, including Word, Excel, Keynote, PowerPoint, and Word Perfect.

INTERESTS

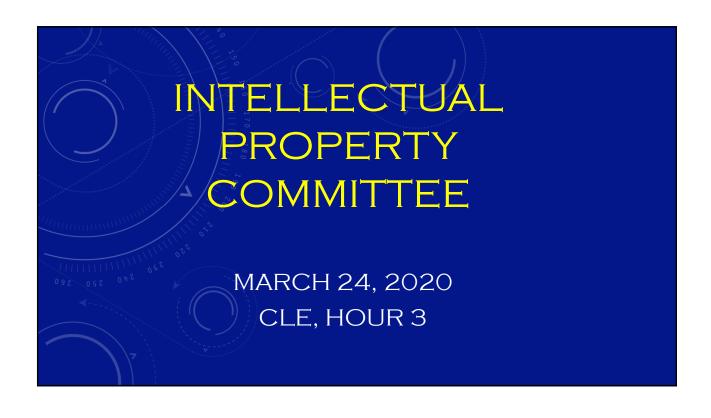
- \cdot Performing and writing music.
- · Flying (licensed private pilot).
- · Boating.
- · Motorcycling.
- · Snow skiing.

REFERENCES

· Available on request.

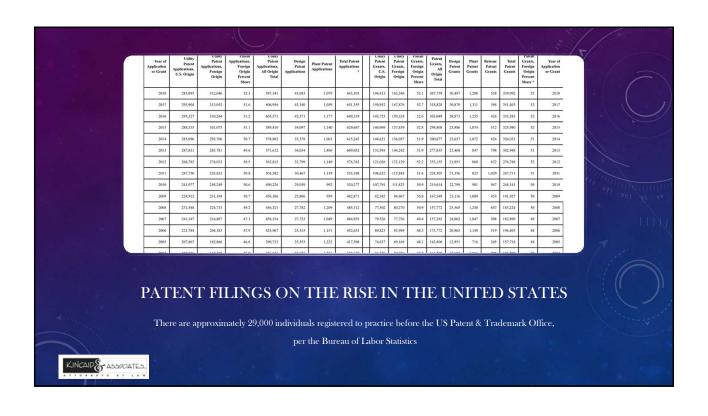
WRITING SAMPLES

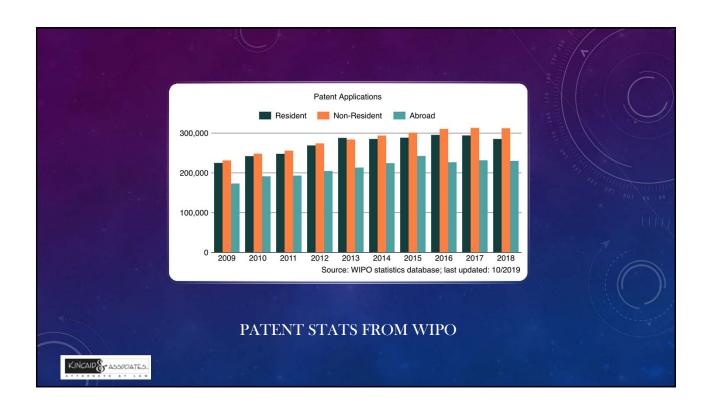
· Available on request.



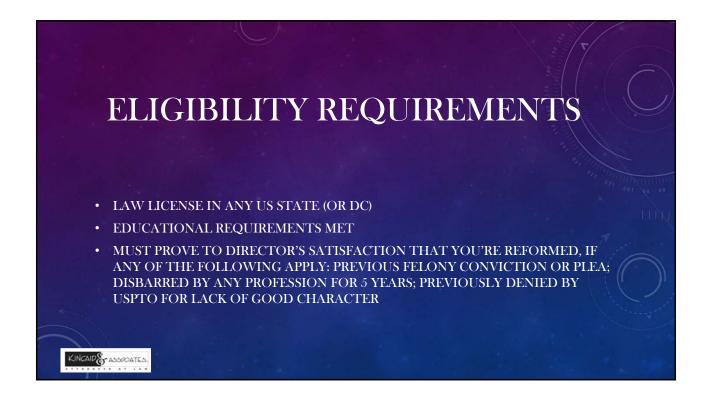






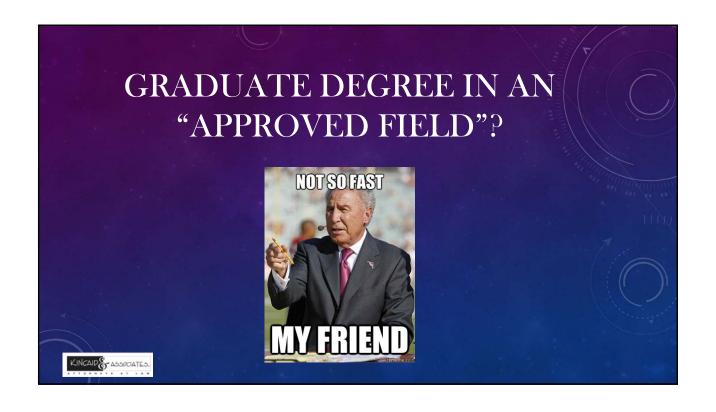












CATEGORY B: APPROVED HOURS

- OPTION 1: 24 SEMESTER HOURS IN PHYSICS. ONLY PHYSICS COURSES FOR PHYSICS MAJORS WILL BE ACCEPTED.
- OPTION 2: 32 SEMESTER HOURS IN A COMBINATION CONSISTING OF THE FOLLOWING:8 SEMESTER HOURS OF CHEMISTRY OR 8 SEMESTER HOURS OF PHYSICS, AND 24 SEMESTER HOURS IN BIOLOGY, BOTANY, MICROBIOLOGY, OR MOLECULAR BIOLOGY.
- OPTION 3: 30 SEMESTER HOURS IN CHEMISTRY. ONLY CHEMISTRY COURSES FOR CHEMISTRY MAJORS WILL BE ACCEPTED.
- OPTION 4: 40 SEMESTER HOURS IN A COMBINATION CONSISTING OF THE FOLLOWING:8 SEMESTER HOURS OF CHEMISTRY OR 8 SEMESTER HOURS OF PHYSICS, AND32 SEMESTER HOURS OF CHEMISTRY, PHYSICS, BIOLOGY, BOTANY, MICROBIOLOGY, MOLECULAR BIOLOGY, OR ENGINEERING.



OTHER ACCEPTABLE COURSEWORK

UNDER OPTION 4, UP TO FOUR SEMESTER HOURS WILL BE ACCEPTED FOR COURSES IN DESIGN ENGINEERING OR DRAFTING. ALSO, UNDER OPTION 4, COMPUTERSCIENCE COURSES THAT STRESS THEORETICAL FOUNDATIONS, ANALYSIS, AND DESIGN, AND INCLUDE SUBSTANTIAL LABORATORY WORK, INCLUDING SOFTWARE DEVELOPMENT WILL BE ACCEPTED. SUCH COURSES INCLUDE THE REPRESENTATION AND TRANSFORMATION OF INFORMATION STRUCTURES, THE THEORETICAL MODELS FOR SUCH REPRESENTATIONS AND TRANSFORMATIONS, BASIC COVERAGE OF -6 -ALGORITHMS, DATA STRUCTURES, SOFTWARE DESIGN WITH A LABORATORY, PROGRAMMING LANGUAGES WITH A LABORATORY, AND COMPUTER ORGANIZATION AND ARCHITECTURE. OTHER ACCEPTABLE COURSES IN COMPUTER SCIENCE INCLUDE ARTIFICIAL INTELLIGENCE AND ROBOTICS, NETWORKING, LINEAR CIRCUITS, LOGIC CIRCUITS, OPERATING SYSTEMS, AND SOFTWARE METHODOLOGY AND ENGINEERING. HOWEVER, THE COURSES MAY NOT BE SUBSTITUTED FOR THE EIGHT SEMESTER HOURS OF CHEMISTRY OR PHYSICS REQUIRED UNDER OPTION 4.





