“What exactly is a copyright?”

“Can I copyright my idea?”

“Can’t I just cut, paste and use content found on the internet?”
The Four Types of IP

• PATENTS
• COPYRIGHTS
• TRADEMARKS
• TRADE SECRETS
In The Beginning...
The (Real) Beginning

• 1556, the first “copyright” law appears in England
  • By royal decree
  • Rights granted to Stationer’s Company
  • To control printing & sale of books, forever

• Statute of Anne, 1710
  • First to protect Authors’ rights, not Publishers’/Printers’
  • Required copies of manuscripts go to Royal library
United States Constitution: Article I Section 8 Clause 8

“To promote the progress of Science and the Useful Arts by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries”
IP’s Ever Ongoing Challenge...

IP constantly strives to strike the right balance for:

- Protections for individual inventors/authors
- To induce and incentive innovation and creative works
- To progress the Commons of a society
Philosophical underpinning – The Individual’s Rights

“as the Heavens and Earth belong to God, because they are works of his Word. ... so the author of a book is its complete master, and as such can dispose of it as he chooses.”

-Marion – sixteenth century French lawyer
Philosophical underpinning – from the individual to the Public

- John Locke (1632 – 1704)
  - “sweat of the brow” doctrine

- Utilitarianists
  - Benefit is outward facing - to the public
  - To promote the Arts (aka Industry)
    - Maps & charts were among the earliest and important ©s
  - A de-emphasis on the moral rights
  - The “copying” right – it’s social by definition
Copyrights

Definition:

• “Copyright subsists for any original work of authorship fixed in a tangible medium of expression.”

Exclusive Rights of copyright holders:

• to reproduce (aka “to copy”); to prepare derivative works; to distribute by sale, transfer of ownership, or by rental, lease, or lending; to perform and/or display publicly;

Duration:

• Life of the Author plus 70 years
Copyrights (duration)

• Life of the Author plus 70 years
  • If you wrote novel today and then died unexpectedly, the © would expire 2088

• For corporate works, works made for hire, anonymous works, the 1st to occur of:
  • 95 years from publication; or
  • 120 years from creation

• Sonny Bono Copyright Term Extension Act, 1998
  • Added 20 years – “Mickey Mouse” Act
Copyrights (cont’d)

• Copyright subsists for any original work of authorship fixed in a tangible medium of expression.

• Rights present upon fixation
  • No printed “©” necessary
  • Formal registration not mandated (unless bringing suit)
    • $35 registration fee online US Copyright Office

• Sample Notice
  • “Copyright YEAR. NAME. All Rights Reserved.”
Works of Authorship

• (1) literary works;
• (2) musical works, including any accompanying words;
• (3) dramatic works, including any accompanying music;
• (4) pantomimes and choreographic works;
• (5) pictorial, graphic, and sculptural works;
• (6) motion pictures and other audiovisual works;
• (7) sound recordings; and
• (8) architectural works.

• Not protected:
  • facts, ideas, titles, procedures, processes, methods of operation, concepts, principles, discoveries or functional items.
  • any work of the United States Government
Titles are not copyrightable
What is original?

• Only a “modicum of originality” required

Supreme Court Case: Feist Publications v. Rural Telephone Service (1991)

Last Name, First Name, Middle, Town, Telephone Number
• Subscriber data deemed not original enough

• Novelty and Importance have no bearing whatsoever
  • Vast majority of works do qualify “no matter how crude, humble or obvious”

• Facts are never protected; Compilations of facts are protected
  • Yellow pages, Almanacs, ...Databases...
<table>
<thead>
<tr>
<th>Column Name</th>
<th>Data Type</th>
<th>Length</th>
<th>Allow Nulls</th>
</tr>
</thead>
<tbody>
<tr>
<td>SourceIP</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>ClientTime Stamp</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>ClientMS</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>ServerTimestamp</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>SessionID</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Component</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
<tr>
<td>EventID</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Severity</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Grouping</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Originator</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
<tr>
<td>OriginatorType</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Target</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
<tr>
<td>TargetType</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>SubTarget</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
<tr>
<td>Text1</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
<tr>
<td>Text2</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
<tr>
<td>Text3</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
<tr>
<td>Value1</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Value2</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Value3</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>MIMETYPE</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>DataSize</td>
<td>int</td>
<td>4</td>
<td>✓</td>
</tr>
<tr>
<td>Data</td>
<td>image</td>
<td>16</td>
<td>✓</td>
</tr>
<tr>
<td>Signature</td>
<td>varchar</td>
<td>255</td>
<td>✓</td>
</tr>
</tbody>
</table>
Machine Code
Source Code
Are they the Same?

Literature

As Robert Frost once stated, "Two roads diverged in a yellow wood, and I took the one less traveled by, and that has made all the difference." I believe that in order to ensure the environmental safety and beauty of Methuen, we need to do something that has never been done before. The road that I am taking today is to increase the number of bees in Methuen. This will have a positive impact on the environment, as bees are important pollinators for many plants. It will also improve the aesthetics and beauty of Methuen. By increasing the number of bees, we will contribute to the natural beauty of our city. This is a positive step towards creating a more sustainable and healthy environment.

Many residents of Methuen understand the advantages of having bees. They are happy because they help pollinate flowers and plants, and thus improve the beauty of our environment. They also understand that bees are important for the production of honey and other bee products. They are excited to see the increase in the number of bees in our community. They are eager to see the positive impact of having more bees in our city. They are enthusiastic about the potential benefits of having bees in Methuen.

Although the idea of having more bees around the town may seem impractical, I can assure you that it is not. If people weren't afraid of bees, they wouldn't be afraid of them. In fact, they are gentle creatures that are only there for our benefit. Being part of the Essex County Beekeepers Association as their 2006 Honey Ambassador, I have come to appreciate these little creatures. While working in the Bee Building at the Topsfield Fair, I have educated many children and adults from different towns about the environmental benefits of having bees in our community.
Copyright for Code

- In 1980, Congress amended the 1976 Copyright Act to include a definition of “computer program.”

- In a Third Circuit Court of Appeals case, the court in *Apple Computer, Inc v. Franklin Computer Corp.* (1983), confirmed that computer programs are in fact literary works protected under the Copyright Act.

- The court held that a computer program, “whether in object code or source code, is a ‘literary work’ and is protected from unauthorized copying, whether from its object or source code version.”
Copyrights (Mediums)

• **Tangible Mediums** include:
  - Traditional Media (paper, canvass, materials)
  - Non Traditional Media (machines, databases, servers, networks, RAM/ROM) count for fixation

• “now known or later developed”
  - Perceived, reproduced, or otherwise communicated directly or the aid of a machine or device
Idea Expression Dichotomy

- Ideas are never protected; just their expression
- The Merger Doctrine
  - Sweepstakes, recipes, how to’s
Infringement/Limitations/Remedies

• Infringement requires:
  • (1) Access; and
  • (2) Substantive Similarity

BUT

• Independent creation allowed – no access thus no copying

• *de minimis* copying allowed – meager, insignificant trifles

• However, “unconscious copying” is not a defense.
  • Software developers beware
  • Musicians beware – “George Harrison” case
Distinction from Plagiarism

• © Infringement ≠ Plagiarism

• Legal infraction vs. academic infraction
Non Literal Infringement

• Levels of Abstraction
• *Scenes a faire*
  • Common Elements, Stock Characters

• Abstraction/Filtration/Comparison Test
  • Filter out Elements Dictated by: Efficiency, External Factors, and Public Domain Elements
Substantive Similarity?
Limitations – Fair Use

• the fair use of a copyrighted work for purposes such as criticism, comment, news reporting, teaching, scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include —

• (1) the purpose and character of the use - commercial v. non commercial purposes
• (2) the nature of the copyrighted work - fiction v. non fiction
• (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
• (4) the effect of the use upon the potential market for or value of the copyrighted work
Fair Use (Cont’d)

• The “Gerry Ford Case” – Harper & Row v. The Nation, Supreme Court, 1985
  • Key parts of Ford’s memoirs “lifted”
  • Court rejected the “public figure” defense
  • Court rejected the “news” defense
  • Court rejected the “non fiction” defense
  • Court rejected the amount defense <1%
  • Court deemed effect upon the potential market the most significant factor and found against The Nation.

• Fair Use is not a quantitative safe harbor. It’s qualitative.

• Parody gets special consideration
Remedies

• Injunctive relief

• Destruction of infringing pieces

• Damages (actual or potential)
  • Statutory - no need to prove actual losses via evidence
  • Up to $150,000 for willful infringement – per infraction

• Criminal prosecution
Public Defenders
Open Source

Open Source Initiative

Licenses by Name

The following licenses have been approved by the OSI via the License Review Process. (For questions about the Public Domain, please see here.)

- Academic Free License 3.0 (AFL-3.0)
- Affero General Public License: See GNU Affero General Public License 3.0 (AGPL-3.0)
- Adaptive Public License (APL-1.0)
- Apache License 2.0 (Apache-2.0)
- Apple Public Source License (APSL-2.0)
- Artistic license 2.0 (Artistic-2.0)
- Attribution Assurance Licenses (AAL)
- BSD 3-Clause "New" or "Revised" License (BSD-3-Clause)
- BSD 2-Clause "Simplified" or "FreeBSD" License (BSD-2-Clause)
- Boost Software License (BFL-1.0)
- CeCILL License 2.1 (CeCILL-2.1)
- Computer Associates Trusted Open Source License 1.1 (CATOSL-1.1)
- Common Development and Distribution License 1.0 (CDDL-1.0)
- Common Public Attribution License 1.0 (CPAL-1.0)
- CUAG Office Public License Version 1.0 (CUA-OPL-1.0)
- EU DataGrid Software License (EUDataGrid)
- Eclipse Public License 1.0 (EPL-1.0)
- eCos License version 2.0
- Educational Community License, Version 2.0 (ECL-2.0)
- Eclipse Forum License V2.0 (EFL-2.0)
- Entessa Public License (Entessa)
- European Union Public License, Version 1.1 (EUPL-1.1) (links to every language's version on their site)
The MIT or BSD License

• Copyright (c) <YEAR>, <OWNER>
  All rights reserved.

• Redistribution and use in source and binary forms, with or without modification, are permitted
  provided that the following conditions are met:

• Redistributions of source code must retain the above copyright notice, this list of conditions and the
  following disclaimer.

• Redistributions in binary form must reproduce the above copyright notice, this list of conditions and
  the following disclaimer in the documentation and/or other materials provided with the distribution.

• Neither the name of the <ORGANIZATION> nor the names of its contributors may be used to endorse
  or promote products derived from this software without specific prior written permission.

• THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"....
GNU General Public License (GPL v2)

• 2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

• (a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.

• (b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

• ...

• 3(a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
CC Non Comm Attribution

• You may not exercise any of the rights granted to You in Section 3 above in any manner that is primarily intended for or directed toward commercial advantage or private monetary compensation. The exchange of the Work for other copyrighted works by means of digital file-sharing or otherwise shall not be considered to be intended for or directed toward commercial advantage or private monetary compensation, provided there is no payment of any monetary compensation in connection with the exchange of copyrighted works.

• If You Distribute, or Publicly Perform the Work or any Adaptations or Collections, You must, keep intact all copyright notices for the Work and provide, reasonable to the medium or means You are utilizing: (i) the name of the Original Author (or pseudonym, if applicable) (ii) the title of the Work if supplied; (iii) to the extent reasonably practicable, the URI, if any, that Licensor specifies to be associated with the Work, (iv) consistent with Section 3(b), in the case of an Adaptation, a credit identifying the use of the Work in the Adaptation (e.g., "French translation of the Work by Original Author," or "Screenplay based on original Work by Original Author"). You may not implicitly or explicitly assert or imply any connection with, sponsorship or endorsement by the Original Author, Licensor and/or Attribution Parties, as appropriate, of You or Your use of the Work, without the separate, express prior written permission of the Original Author, Licensor and/or Attribution Parties.
Protection of Software Inventions

Copyright law aims to protect expression over functionality, but computer software is unique in that it is a creation that incorporates both functionality and expression.
Patents on Software?

• The issue with software, algorithms, and methods of doing business centers around what constitutes an unpatentable idea

• Computer Processes
  • A process may be patentable if it is tied to a particular machine or apparatus (aka a computer or device), or
  • If it is Transformative
  • AKA not just an abstract idea applied to a computer
Software IP

• Explicit code is covered by ©
  • Will not protect against clean room coding

• Functional ideas and algorithms can be protected by patents
  • Prevents non literal competition
  • Controversial

. . .BUT THAT’S A STORY FOR ANOTHER IAP
Thank You!

Questions?

ddardani@mit.edu
Twitter: @IPManDan
https://www.linkedin.com/in/danieldardani