

UNIVERSITY OF
Southampton

Digital Intellectual Property Rights

COMP6218 Web Architecture

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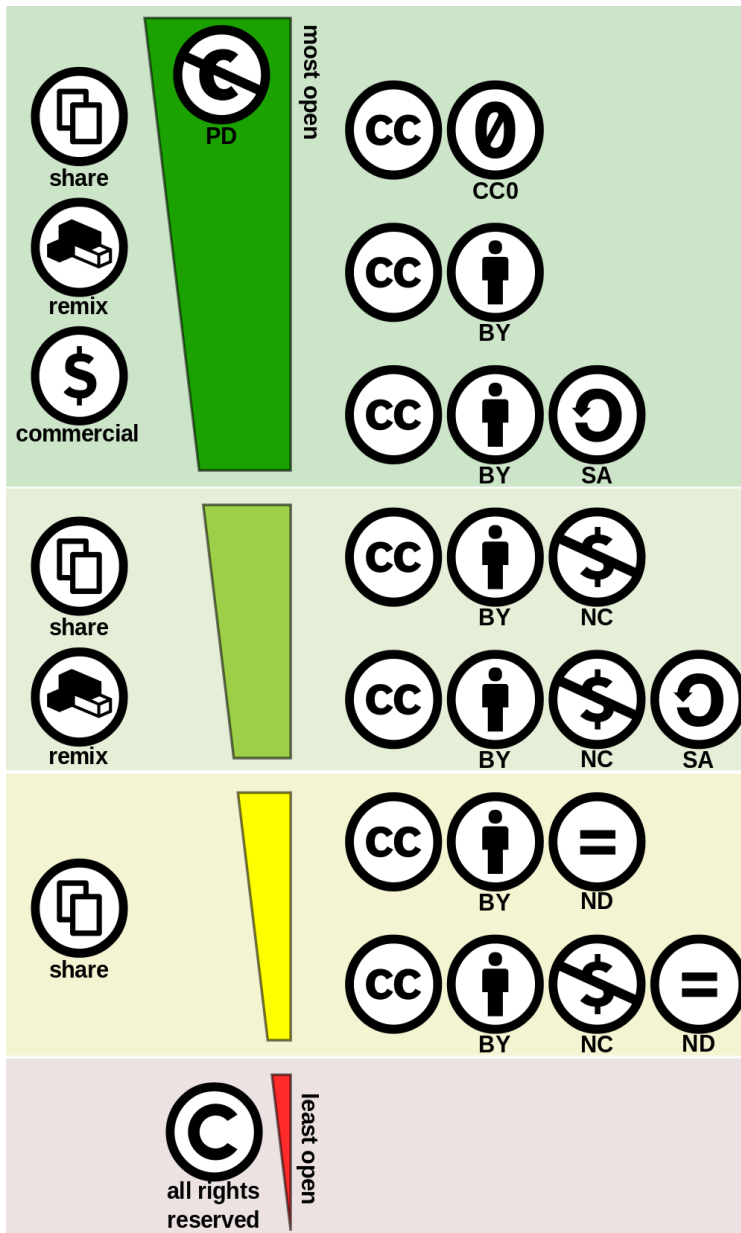
Copyright & Digital Technology

- Ease of Reproduction
 - Once a work is rendered in digital form, it can be reproduced
 - Rapidly
 - At little cost
 - Without any loss of quality
 - Each copy, in turn, can be further reproduced without any loss of quality
- Ease of Storage
 - Gb media files vs Tb hard disks
- Ease of Dissemination
 - Gb media files vs fibre optic and 4G networks

Digital Intellectual Property Solutions

Licensing

- A license allows someone (the licensee) to use a work for some or all purposes, but the owner retains ownership
- The license may be for a fixed period or it may be in perpetuity
- In an assignment, the copyright owner transfers some or all of the rights of ownership to someone else (the assignee)
- Explicit licenses are rarely provided
 - They are frequently unhelpful
 - <https://www.flickr.com/photos/detroitderek/>



Creative Commons Licensing

- Creative commons addresses legal problems in the area of global copyright law
- Offers viable middle ground between
 - Stringent copyright controls
 - Completely unfettered use of content
- Provides a set of user friendly online licenses
- Authors, musicians and other creators of content can use these licenses to protect some of their ownership rights, while giving others away
- A new global standard or layer of copyright law promoting the dissemination of digital content and the free exchange of ideas
- Set up your own creative commons license at creativecommons.org
- Once registering something, Code is embedded into an html page to display the license

Types of Creative Commons Licenses



ATTRIBUTION

Can someone use my work to make money?

Can someone change my work?



ATTRIBUTION-NONCOMMERCIAL

Can someone use my work to make money?

Can someone change my work?



ATTRIBUTION-NONCOMMERCIAL-NODERIVS

Can someone use my work to make money?

Can someone change my work?



(MUST ALSO BE LICENSED BY-SA)

ATTRIBUTION-SHAREALIKE

Can someone use my work to make money?

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ATTRIBUTION-NODERIVS

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ATTRIBUTION-NONCOMMERCIAL-SHAREALIKE

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*<https://www.connectsafely.org/copyright/>



All

Images

Videos

News

Shopping

More

Settings

Tools

Size

Color

Type

Time

Creative Commons licenses

Clear



kitten



baby



anime

- All
- ✓ Creative Commons licenses
- Commercial & other licenses

white



fluffy



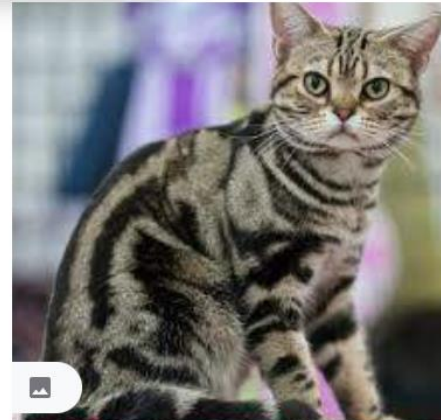
beautiful



The Blackest of Cats | There are so ... flickr.com



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30,000+ Free Cats & Animal Image... pixabay.com



YouTube

- YouTube allows users to upload video
- Standard YouTube License: Uploader holds copyright, Creative Commons can be selected
- YouTube has been criticised for copyrighted content
- Provides ability to embed videos to maintain control over IP
- A large proportion of YouTube's revenue goes to the copyright holders of the videos
- In early 2007, Viacom served 100,000 take down notices, and sued YouTube for \$1 billion

YouTube's Content ID

- **Content ID** is a system for automatic detection of uploaded videos that infringe copyright
- Allows Copyright holders to manage their content
- Only for large content owners
 - Substantial body of original material
 - Frequently uploaded by YouTube Creators
- Copyright holders upload their content to **Content ID** system which generates fingerprints

YouTube's Content ID cont.

- Every submission by a “YouTube Creator” is matched against fingerprint database
- Content is flagged and Rights holder can
 1. Track
 2. Claim
 3. Block
 4. Strike (Full takedown)
- YouTube Creator can dispute claims and blocks
- After claim resolution revenue generated is passed to Rights holder or YouTube Creator

Problems with Content ID

- Only as good as the Matching Algorithm and Content ID database of fingerprints
 - 99.7% accurate but 500 hours per minute being uploaded
 - A lot of false negatives/positives
- Rights holders can take down negative videos but leave positive
- Creators can loose channel if the receive too many strikes

Web Standards and Digital Rights Management (DRM)

- Encrypted Media Extensions standard
- DRM systems to hook directly into browser
- Video streams eg Netflix in the browser
- Avoids needing plugins like Flash or Silverlight
- Controversial for W3C
 - No View Source

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🎬 Entertainment

🚴 Sports

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🏠 Health

Language & region
English (United Kingdom)

Settings

Your local news



Southampton



London



Manchester



Add

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Daily Echo · 15 hours ago



Covid: Updated list of coronavirus case numbers for Portsmouth, Hampshire, Southampton, Winchester, Basingstoke, Eastleigh, Fareham, Gosport, Havant, East



Google News and Legal Action

- Google was sued by:
 - Agence France-Presse for using photos, stories and news headlines 2005
 - Belgium news sources for using lead paragraphs 2007
- Laws passed by German and Spain allowing publishers to charge a fee for other providers publishing short snippets of news
 - German 2013 law
 - Google refused to pay and delisted publishers
 - Publishers saw 40% drop in traffic
 - Google then successfully challenged the law; ruled invalid due to procedural issues
 - Spain introduced a similar law in 2014
 - Google shut its Google News service for Spain
- Dubbed “Google tax” because it targeted Google display news results in search results

Learning Outcomes

- You should be able to implement a creative commons license
- Describe why the Content ID system used by YouTube supports copyright owners
- EME DRM standard supports sharing copyrighted material on media sharing platforms
- Highlight key copyright aspects in the court case between Google news and news outlets