August 1-3, Foundation University, Dumaguete

PISTA NG MAPA

open data & software • free maps • community • talks • workshops

Introduction to
Open Communities

Eugene Alvin Villar • Pista ng Mapa • 1 August 2019

Or: a "brief" history of openness in three chapters

Ch.1: Free and Open-Source Software

Ch.1: Free and Open-Source Software

Ch.2: Free and Open Standards and File Formats

Ch.1: Free and Open-Source Software
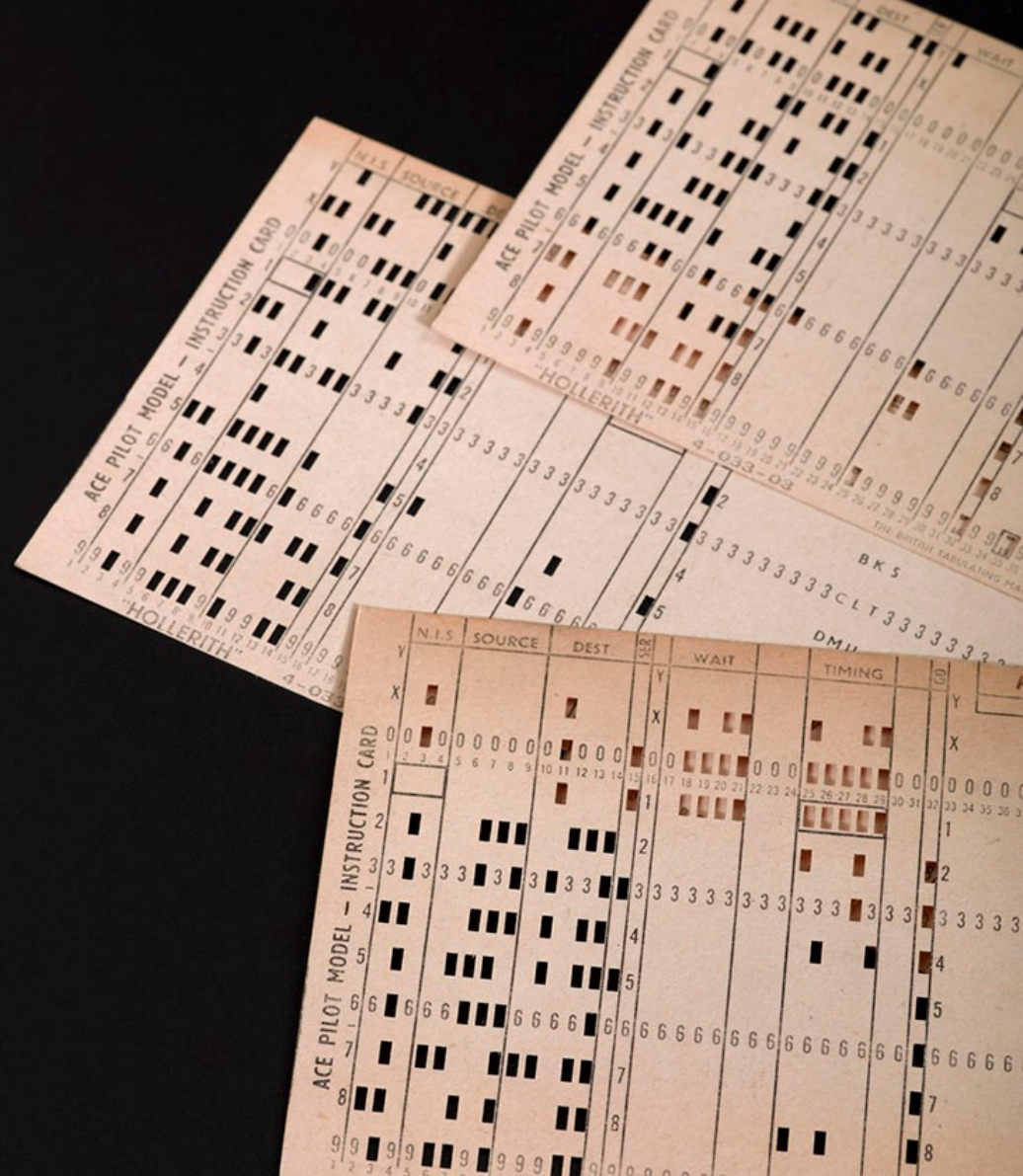
Ch.2: Free and Open Standards and File Formats

Ch.3: Free and Open Content, Data, and Knowledge

Chapter 1

Free and Open-Source Software (FOSS)

From the 1950s to the 1970s, most software was actually free and open

Starting in the 1970s, computer companies started charging for software that is often compiled, with no source code

In 1974, the US Commission on New Technological Uses of Copyrighted Works (CONTU) decided that software was copyrightable

Free Software Movement

Richard
Matthew
Stallman
(rms)

1983
GNU Project

1985

Free Software Foundation (FSF)

The Free Software Definition: Four Freedoms

Freedom 0:
The freedom to
run the program
for any purpose

Freedom 1:

The freedom to study how the program works, and change it to make it do what you wish

Freedom 2:
The freedom to redistribute copies so you can help your neighbor

Freedom 3:

The freedom to improve the program, and release your improvements to the public

1989

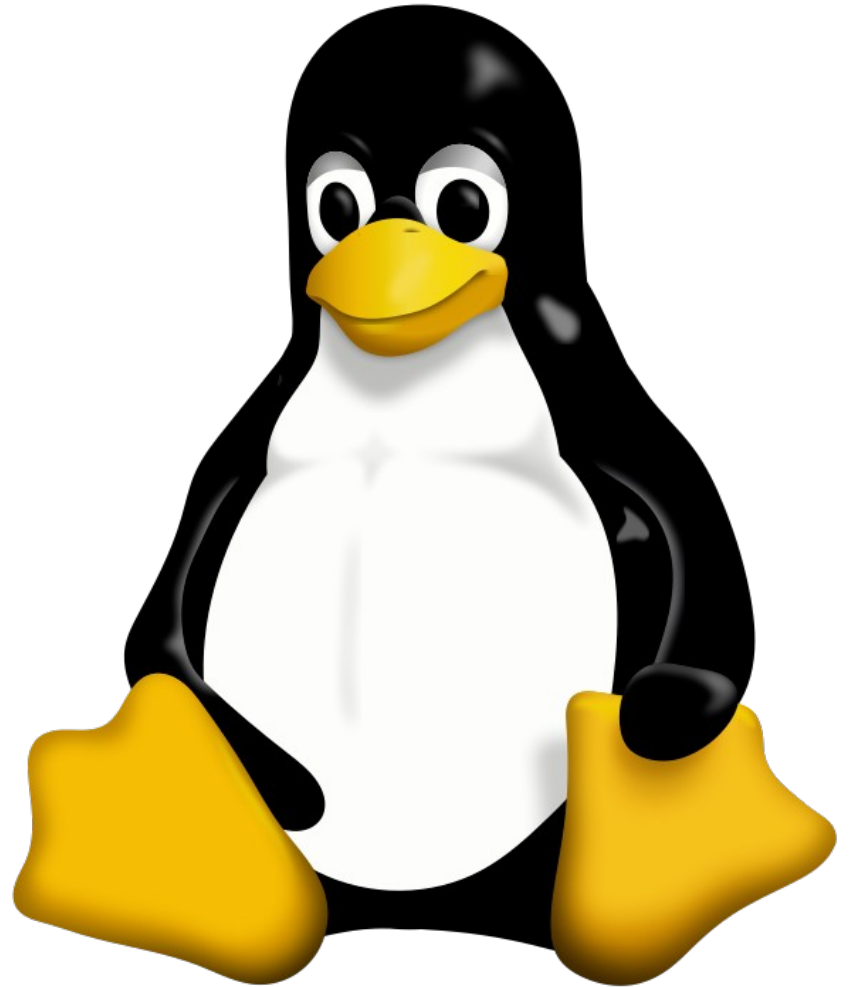## GNU General Public License

(the pioneer "copyleft" license)

Linus
Torvalds

1991

Linux kernel

Open Source Movement

1997

"The Cathedral and the Bazaar"

(essay by Eric S. Raymond)

1998

Open Source Initiative (OSI)

open source
initiative

Open Source Definition

(based on the Debian Free Software Guidelines)

1. Free Redistribution
2. Source Code
3. Derived Works
4. Integrity of the Author's Source Code
5. No Discrimination Against Persons or Groups
6. No Discrimination Against Fields of Endeavor
7. Distribution of License
8. License Must Not Be Specific to a Product
9. License Must Not Restrict Other Software
10. License Must Be Technology-Neutral

Examples of FOSS licenses:

Apache License

Artistic License

BSD License

MIT/X11 License

GNU General Public License

GNU Lesser General Public License

Mozilla Public License

Proprietary

Microsoft Windows

Microsoft Office

Adobe Creative Suite

Oracle Database

FOSS

GNU/Linux, FreeBSD

OpenOffice, LibreOffice

GIMP, Inkscape, Blender

MariaDB, Postgres, SQLite

"Linux is a cancer"
—*Steve Ballmer,
Microsoft CEO, 2001*

"Windows 10 will include a full Linux kernel"
—Microsoft, 2019

2006

Open Source Geospatial Foundation (OSGeo)

Proprietary

Esri ArcGIS,
Esri ArcView,
Manifold GIS,
MapInfo Professional,
Google Earth Client,
Google Maps API,
etc.

FOSS

QGIS, GRASS GIS,
GDAL/OGR, PROJ,
PostGIS, SpatiaLite,
Marble, GeoNode,
GeoServer, OpenLayers,
Leaflet.JS, OpenDroneMap,
etc.

Ch.2: Free and Open Standards and File Formats

Ch.1: Free and Open-Source Software

Chapter 2

Free and Open Standards and File Formats

Generally, proprietary software used proprietary standards and file formats while FOSS used open standards and file formats

For years, Microsoft Office files—Word documents, Excel spreadsheets, and PowerPoint presentations—were the poster child for proprietary file formats

2002

OASIS' OpenDocument Technical Committee (ODF-TC)

2005

OpenDocument Format Standard

(later became an ISO standard in 2006)

2006

Microsoft's
Office Open XML standard
(very contentious)

Proprietary	Free/Open
Adobe PSD, JPEG, GIF	PNG, XCF, OpenRaster
Adobe Illustrator File	SVG
MPEG, H.264	WebM, Ogg Theora
MP3, Microsoft WMA	FLAC, Ogg Vorbis
Adobe Flash	XML, HTML, JSON

1994

Open Geospatial Consortium (OGC)

Proprietary

Esri Grid,
Esri Shapefile *(somewhat)*,
Esri TIN,
MapInfo Tab Format,
etc.

Free/Open

Keyhole Markup Language (KML), GeoJSON, GeoTIFF, Well-known Text (WKT), Well-known Binary (WKB), Web Map Service (WMS), Web Map Tile Service (WMTS), SpatiaLite DB, *etc.*

Ch.1: Free and Open-Source Software

Ch.2: Free and Open Standards and File Formats

Ch.3: Free and Open Content, Data, and Knowledge

Chapter 3

Free and Open Content, Data, and Knowledge

1998

United States "Sonny Bono" Copyright Term Extension Act
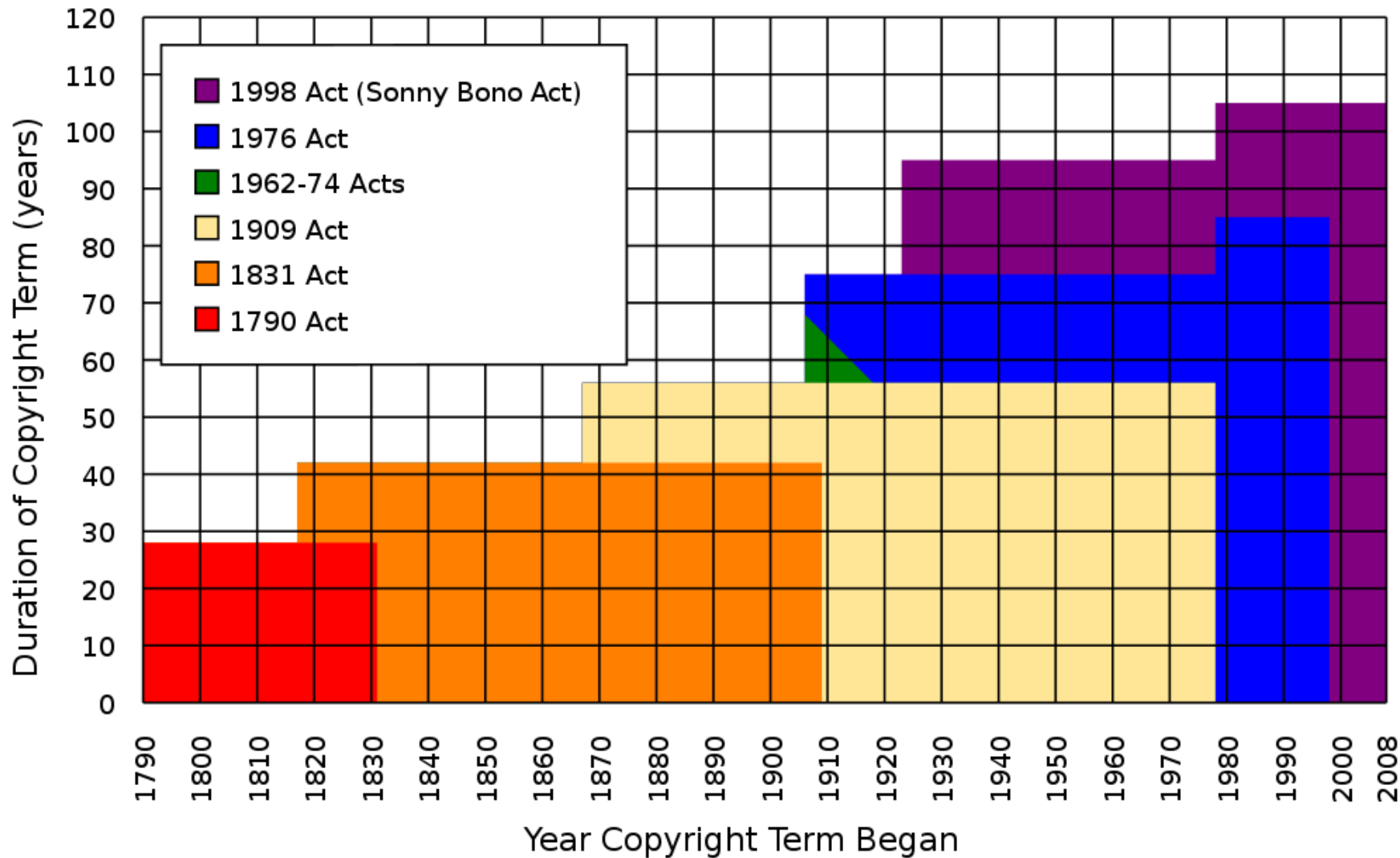*(aka the Mickey Mouse Protection Act)*

Personal copyright:

From*: life of author + 50 years*

To*: life of author + 70 years*

Corporate copyright:
From: 75 years from publication
To: 120/95 years from publication

Chart showing Duration of Copyright Term (years) on the vertical axis versus Year Copyright Term Began on the horizontal axis.

Legend:
- 1998 Act (Sonny Bono Act)
- 1976 Act
- 1962-74 Acts
- 1909 Act
- 1831 Act
- 1790 Act

2003

Eldred v. Ashcroft

(U.S. Supreme Court case)

Lawrence Lessig

2001
Creative Commons

2004

Free Culture

(book)

FREE CULTURE

HOW BIG MEDIA USES TECHNOLOGY AND THE LAW TO
LOCK DOWN CULTURE AND CONTROL CREATIVITY

LAWRENCE LESSIG

2006
Definition of Free Cultural Works

Freedoms of Free Culture Licenses

(based on the Free Software Foundation's Four Freedoms)

Freedom 1:
The freedom to
use and perform the work

Freedom 2:
The freedom to study the work and apply the information

Freedom 3:

The freedom to redistribute copies

Freedom 4:
The freedom to
distribute derivative works

Examples of Free Culture licenses:

Against DRM

Creative Commons Zero

Creative Commons Attribution

Creative Commons Attribution ShareAlike

Free Art License

GNU Free Documentation License

MIT License

Definition of Free Cultural Works

Definition 0:
Freely-licensed (or equivalent)

Definition 1:
Availability of source data

Definition 2:

Use of a free format
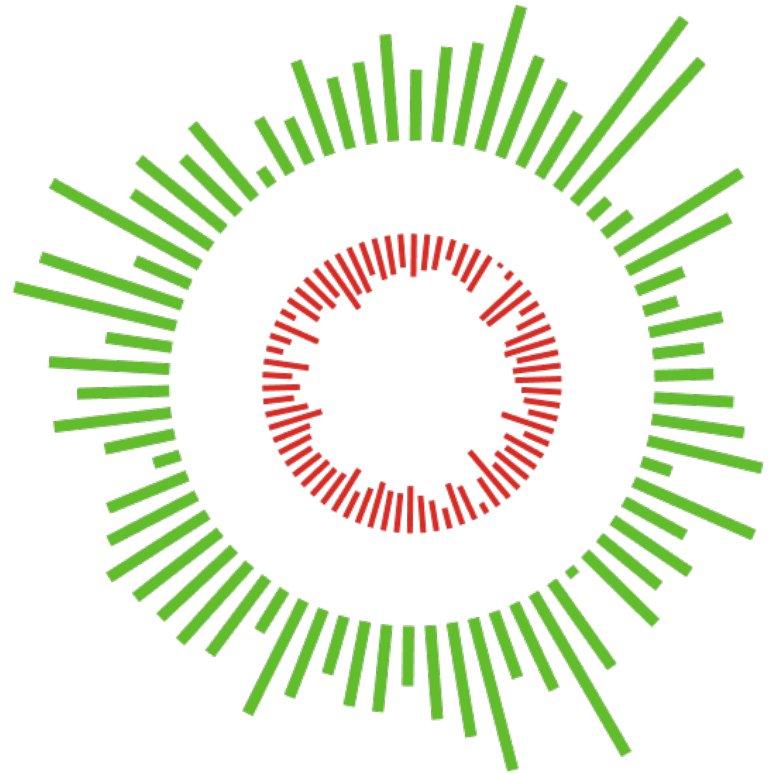*(see chapter 2)*

Definition 3:

No technical restrictions
(aka, no DRM or digital rights management)

Definition 4:
No other restrictions or limitations

2004

Open Knowledge Foundation (OKF)

OPEN KNOWLEDGE
FOUNDATION

Open Definition

(Based on the Open Source Definition)

Summary:
Knowledge is open if anyone is free to access, use, modify, and share it
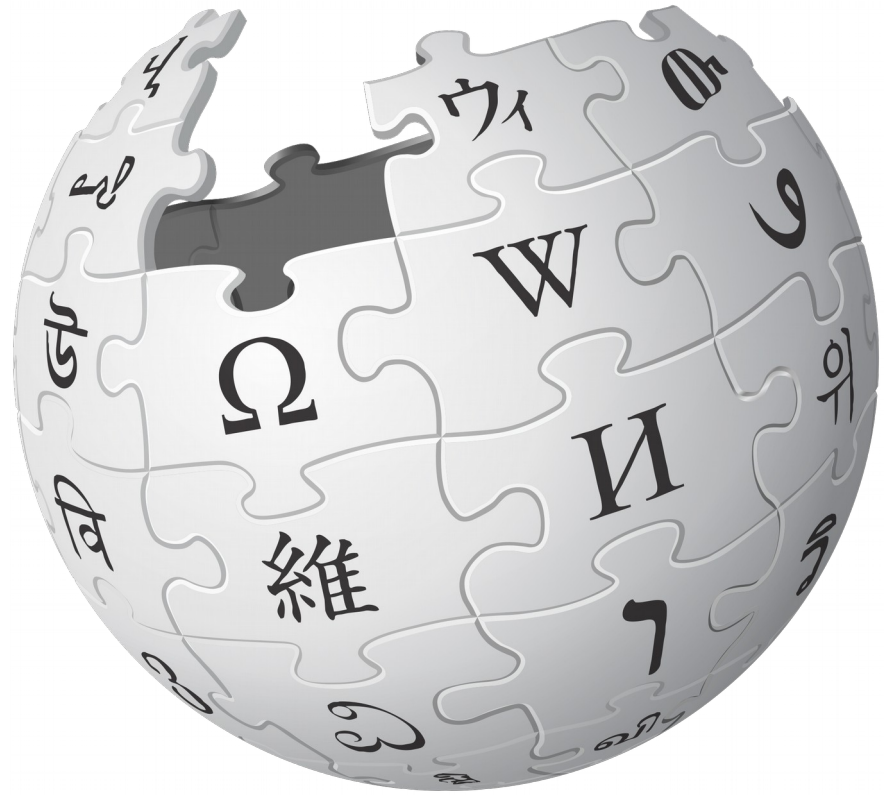
Open Data Commons data licenses:
ODC Open Database License (ODbL)
ODC Attribution License (ODC-By)
Public Domain Dedication and License (PDL)

2001
Wikipedia

2001

Wikimedia Movement

2004
OpenStreetMap

The United Kingdom's Ordnance Survey released some of their data under the OpenData License in 2010 and then under the Open Government License (OGL) in 2015

Proprietary

Maxar imagery,
Google Maps data,
TomTom map data,
HERE map data,
etc.

Free/Open

OpenStreetMap,
OpenAerialMap,
Landsat imagery,
Mapillary photos,
OpenStreetCam photos,
etc.

Chapter 1

Chapter 2

Chapter 3

Open Source Geospatial Foundation

Open Geospatial Consortium

OpenStreetMap

Pista ng Mapa:
a festival celebrating the power of openness!

Thank you.