

half a revolution

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before open access

- open access is still young
- 2003: Berlin Declaration, Bethesda Statement
- 2002: Budapest Open Access Initiative
- 2000: Public Library of Science
- 1999: E-biomed
- 1994: Subversive Proposal
- 1991: arXiv.org




What 's GNU?

- Paul Ginsparg, through his brother, knew Richard Stallman, creator of GNU
- what 's GNU?
 - GNU 's Not Unix
 - started 1983
 - project to write an operating system that was freely available
- sharing as a moral imperative

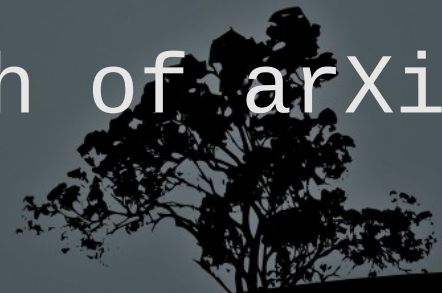


General Public Licence


- 4 freedoms
 - freedom to run the program, for any purpose
 - freedom to study how the program works, and change it
 - freedom to redistribute copies
 - freedom to distribute copies of your modified versions to others
 - origin of all key modern licences
 - e.g. Creative Commons
 - constitution for sharing
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greatest week in history?


- after 8 years, GNU still lacked a kernel
 - the heart of the operating system
- 25 August 1991, Finnish student, Linus Torvalds, announced the start of Linux
- 23 August 1991 – World Wide Web released publicly
- 19 August 1991 - launch of arXiv




the secret of Linux

- 95% of top 500 supercomputers
 - Google's million+ servers run it
 - 81% of smartphones sold in Q3 2013 use Linux in form of Android
 - Linux shows that distributed, collaborative development worked
 - Linux proves that sharing freely worked better than hoarding
 - once knowledge is digital, it can be shared infinitely
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Project Gutenberg

- 1971 – Michael Hart given \$100,000,000 of computer time on Xerox Sigma V mainframe at the University of Illinois
 - felt obligation to repay that value somehow
 - typed US "Declaration of Independence" and posted it online
 - PG: 1 - 1971; 10 - 1989; 1,000 - 1997; 42,000 - today
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universal and total access

- based on original insight that once a text has been digitised, it can be shared endlessly, for vanishingly small cost
 - for first time in history, it is possible to provide (open) access to all human knowledge
 - moral imperative to share that knowledge with everyone so that they can use and build on it
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Berlin Declaration

- definition of open access:
 - "The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship"

licensing mix


- CC-NC and CC-ND do not satisfy this definition
 - limit sharing and re-use
- need to move to CC-BY, CC-SA, CC-BY-SA, CC0
 - maximise sharing and re-use
- meeting Open Knowledge Foundation's Open Definition



triggers and buttons

- publicly-funded => open access
- embargoes
 - 6 months; White House public access policy enshrined 12 months
 - publicly-funded research must be available immediately
 - ZEN approach: zero embargo now
- Clay Shirky: publishing isn't a job or an industry, it's a button
- we need publishing equivalent of Red Hat or Google

open data

- increasingly digital world brings with it data
 - open access requires open data
 - open formats, interoperable licences for both data and the database
 - Open Definition-compliant
 - Public Domain Dedication and Licence (PDDL); Attribution Licence (ODC-BY); Open Database Licence (ODC-ODBL)
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digital research

- Berlin Declaration:
 - "open access contributions include original scientific research results, raw data and metadata, source materials, digital representations of pictorial and graphical materials and scholarly multimedia material."
- one other aspect, which grows more important each year
- software used in research



open source research

- all research, especially science, increasingly depends on software to generate and analyse data
- to check the data and analysis, we need the code
- to check the code, it must be viewable
- for open access, research code must be released as open source
 - maximise re-use



patent failure


- major obstacle is patenting
- 1980 Bayh-Dole Act allowed US universities to hold patents on results of tax-funded work
- Bayh-Dole is a failure:
 - 95% of patents on US tax-funded research never been licensed, locking up knowledge
 - drain on academic resources
- publicly-funded work must place all inventions in public domain

future perfect open access

- ZEN: zero embargo now
- text, graphical material, data and databases: Open Definition compliant
- software: open source
- inventions: public domain (no patents)



half a revolution

- Berlin Declaration:
 - "our mission of disseminating knowledge is only half complete if the information is not made widely and readily available to society."
 - for all the amazing achievements of open access so far , information is not "widely and readily available to society"
 - open access mission is only half complete
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complete the revolution

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