

# OPEN SOURCE CONTENT

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IS 296A Open Source Class,  
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## PROPOSED SCHEDULE 11/28

- 2 projects on open source texts (4:15-4:45)
  - Open CRS (group 1)
  - Open source text books (group 2)
- 3 projects on open source music (4:45-5:30)
  - ccmixer (group 6)
  - comparison of ccmixer, other open music (group 4)
  - musicbrainz (group 9)
- 2 projects on space (5:40-6:10)
  - placelab (group 5)
  - openstreet map (group 10)

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## SCHEDULE 11/28

- 2 on distributed information (6:10-6:40)
  - disaster recovery (group 8)
  - distributed computing (group 3)
- 1 on standards (group 7) (6:40-6:55)
- PIZZA

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## RULES & GUIDELINES

- 15 minute limit will be strictly enforced (no matter how interesting your project is)
- Presentations that leave time for at least 5-7 minutes of class discussion are better
- OK to post something on class listserv to introduce classmates to subject of your project, but must not be too demanding
- Good to cover key issues from course (or explain why standard framework doesn't apply)

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# OPEN SOURCE

- Software was obviously where “open source” concept started
  - That’s what the “source” is about
- But the concept has been spreading to other fields besides software
- Last time we will talked about open source biology
- This week PLOS, Creative Commons, wikipedia
- More OSDDDI projects on other open source content (SETI, open source music, open source textbooks)

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# WHY BIOTECH OS PLAUSIBLE

- Convergence of computing and biology means bioinformatics tools are important tools of innovation
  - Because this is software, it fits quite easily
  - Databases also play a key role in scientific work
  - Many biotech problems are computationally intensive
- Similar circumstances as impetus
  - Too much secrecy, proprietary rights increasing transactions costs + fees arguably slowing down the pace of innovation in the field
  - Openness will speed up pace of innovation, transfer knowledge
  - Switch from non-proprietary to proprietary orientation over time, so some desire to restore non-proprietary environment

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## MORE ON PLAUSIBILITY

- Lots of technical experts who may be able to make discrete contributions asynchronously
- Internet as medium of distribution to share knowledge to enable distributed collaboration to occur
- Some large-scale problems may need distributed networked collaboration to solve
- Way to reduce costs, spread access to technology to financially weaker parties

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## WHY BIOTECH OS IMPLAUSIBLE

- Different kind of production process
- Need for wet-labs and biological materials
- Different industry structures
- Different kinds of intellectual property rights
- Role of public funding
- Different ethos in the biotech than software fields
- Not same potential for business models to support OS firms (e.g., installation, maintenance, adaptation services)

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# PATENT ISSUES

- It costs \$ to patent (in contrast to © which is automatic & practically free)
  - Not same leverage as basis for conditioning agreement to license terms
  - OS ethos not compatible with patenting
  - Yet may need to have something to base license
  - Have to be able to recoup costs of filing for and renewing patents
- No necessary relation between patents and specific products (as there is between software and ©)
- Already get disclosure from patents
- Patent pools or public domain may be an alternative
- Patent misuse issues, antitrust, public policy limits

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# PUBLICLY FUNDED RESEARCH

- Bayh-Dole Act: universities encouraged to patent gov't –funded research
  - Have to report inventions
  - Govt able to take patents if university doesn't claim them
  - Should this be changed when possible to achieve goal of widespread use without commercialization?
- Need for very substantial investments downstream to take raw discovery to market (e.g., refinement, clinical trials)
- Very important for upstream innovations (e.g., research tools, data) to be available on reasonable licensing basis
- Public domain may have importance too

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## OPEN CONTENT SIMILAR TO SW

- Desire to facilitate sharing of content
- Desire for intermediate alternative to full-dress © and public domain
- © as a “hook” upon which to leverage open source license restrictions
- “Viral” license (servitude on IP?)
- Institutions formed to develop licenses
- Concern with fragmentation (too many licenses)
- Collective action problem solved
- Low transactions cost way to facilitate open access
- Competitive impact (competition changes market)

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## OPEN CONTENT DIFFERENT

- Highly heterogeneous content types, author types, modes of dissemination, commercial landscape
- Production process generally quite different from F/OSS
  - Wikipedia is more F/OSS-like because it modularizes the task, draws upon dispersed community to make contributions, but most are very different
  - Adaptations more likely to be troublesome for non-sw content (attribution, mutilation issues)
  - Non-technical amateur creators cf. technical whizzes

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## OPEN CONTENT DIFFERENT

- Not reaction to Microsoft (but may be reaction to entertainment industry cartel)
- Network effects generally not a driver for open content
- Standardization key for F/OSS, not for other content
- Already get disclosure, so no need for license to require this
- Not same free-rider problem being addressed; more like an anti-commons (too many rights to clear; too costly to clear)

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## OPEN CONTENT DIFFERENT

- Fair use has a role to play
  - Small-scale copying, sharing; sampling; parodies; etc
- Technical markup about license in CC
- Reverse engineering, Ks vs. RE, interoperability, patents very big deal with F/OSS, but not with digital content
- Want sharing to promote access to culture
- Preservation of end-to-end principle

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