THE CATHEDRAL AND THE BAZAAR
BY ERIC S. RAYMOND
CONTEXT

Eric Steven Raymond

- American computer programmer, author and OSS advocate
- Co-founded the Open Source Initiative
- Essay was published in 1999
THE CATHEDRAL AND THE BAZAAR

Early participant – Unix, Lisp

Preconceived belief:
- complex systems must be built as cathedrals
  - available source code, but restricted between releases
- small tools could be built in bazaar style
  - every person that want to contribute is welcome

Formulates 19 guidelines
LINUX

- In 1991, Linus Thorvalds released Linux
- Overturned the cathedral belief
- Babbeling bazaar of people created a first class operating system
FETCHMAIL

• Anecdotal references to his own project
• Technical problem

1. Every good work of software starts by scratching a developer’s personal itch.
2. Good programmers know what to write. Great ones know what to rewrite (and reuse).

-Partial solutions available already
3. “Plan to throw one away; you will, anyhow.”

4. If you have the right attitude, interesting problems will find you.

5. When you lose interest in a program, your last duty to it is to hand it off to a competent successor.
• Eric inherited a mail client
• Wanted to try the bazaar style
• Understood the importance of users

6. Treating your users as co-developers is your least-hassle route to rapid code improvement and effective debugging.
Linux style of developing

Opposite of cathedral building


What about bugs?
LINUS’ LAW

Maximizes the # of debugging hours

8. Given a large enough beta-tester and co-developer base, almost every problem will be characterized quickly and the fix obvious to someone.

-> Given enough eyeballs, all bugs are shallow.

• Different views of the phenomenon bugs
• A problem will be transparent to somebody
DELPHI EFFECT

Applies to debugging

Characteristics of open-source:
• Interested and motivated users
• Self-selected tasks
• Many users result in faster bug discovery
• Both users and developers are “inside”
Complies with Crowston’s onion model
RESULT

- Central thesis: “given enough eyeballs, all bugs are shallow”
- Convinced OSS developers to adopt the bazaar style
- Final push for Netscape in 1998.