

How are FOSS projects governed?

COMP8440: FOSSD
Lecture 7

What is project governance?

- Projects often need to make decisions
 - Development decisions
 - Legal decisions
 - Tools decisions
 - Project aims
 - and many, many others

What project structures allow decisions to be made?

Key governance features

- How governance is distinguished
 - Formal vs informal
 - Degree of project funding
 - Is there an identifiable 'project team'?
 - Does the project have a legal structure?
 - Does the project have a BDFL ?
(benevolent dictator for life)
 - Is it a 'hobby' project?
 - Is there an agreed voting system?
 - Does the project have a copyright policy?
 - Does the project have an explicit code of conduct?
 - e.g. <https://www.rust-lang.org/conduct.html>
 - How are decisions documented?

Project Roles

- Many projects have designated roles
 - Can be formal or informal
- Common roles (individual or group)
 - Project leader
 - Release manager
 - Bug master
 - Documentation master
 - Web master
 - Security officer
 - PR officer
 - Mailing list manager
 - Legal officer
- Not unique
 - Often one person will take several roles
 - Roles may rotate between people

Project Funding

- Funding varies a lot between projects
 - Some projects have corporate sponsorship
 - e.g. opensolaris.org
 - Some projects rely on donations
 - e.g. freebsd.org
 - But most are purely volunteer efforts
 - e.g. most sourceforge projects
- Give back more than they cost?
 - Various estimates put the cost of development of a major Linux distribution at several billion US\$
 - Project funding is a tiny fraction of that
- Google summer of code

Legal Structure

- Some projects have a legal structure
 - Mostly for larger, older projects
- Many are non-profits or charities
 - Perhaps the most common is a US 501(c)3
- Project groups
 - Many projects form groups for their legal structure
 - Apache projects
 - GNU projects
 - KDE projects
 - Gnome projects
 - Software Freedom Conservancy

Voting Systems

- Many projects have adopted a voting system
 - Most decisions are not voted on
 - Often used for election of project roles
 - Sometimes used for patches
- The Apache voting system
 - Variants are used by many projects for patch voting
 - Voters can respond with
 - +1 : agree
 - =0 : abstain
 - -1 : veto
 - A veto cannot be ignored and must come with an explanation

Committers

- **Direct commit access**
 - Most FOSS projects have a list of people who have commit access
- **Adding committers**
 - Usually involves an invitation from existing committers
 - The key is good judgement
- **Should inactive committers be removed?**
 - If they still have good judgement, maybe not
 - Is there a security risk in old commit access?
- **Committers with distributed SCM**
 - May not have the notion of a committer role
 - 'Integrators' or 'subsystem maintainers' play a similar role

Project Leaders

- Varying approaches to leadership
 - Some projects have a default project leader, often the project founder
 - Some projects use a steering committee or board
 - Some projects vote on the leader each year
 - Some projects have no easily identifiable leader
- What the leader does
 - Help to decide on project goals
 - Help to resolve disputes
 - May set the standards for code, testing and other development tasks
 - Often acts as project spokesperson

Release Manager

- A key role
 - Putting a release together can be a lot of work
 - Needs a lot of coordination of development activity
 - What goes into a release?
 - Some projects base it solely on time
 - Some projects vote on what is required to make something release ready
- Stable/unstable releases
 - Many projects have separate stable/unstable releases
 - Standards may be higher for the stable releases
 - Odd/even release numbering has become common

Projects Evolve

- **Starting simple**
 - Most projects start out with very little governance
 - Simple governance makes for fast early development
- **Complexity added as its needed**
 - As issues and disputes arise, new governance systems are added
 - Often solutions are adopted from other projects