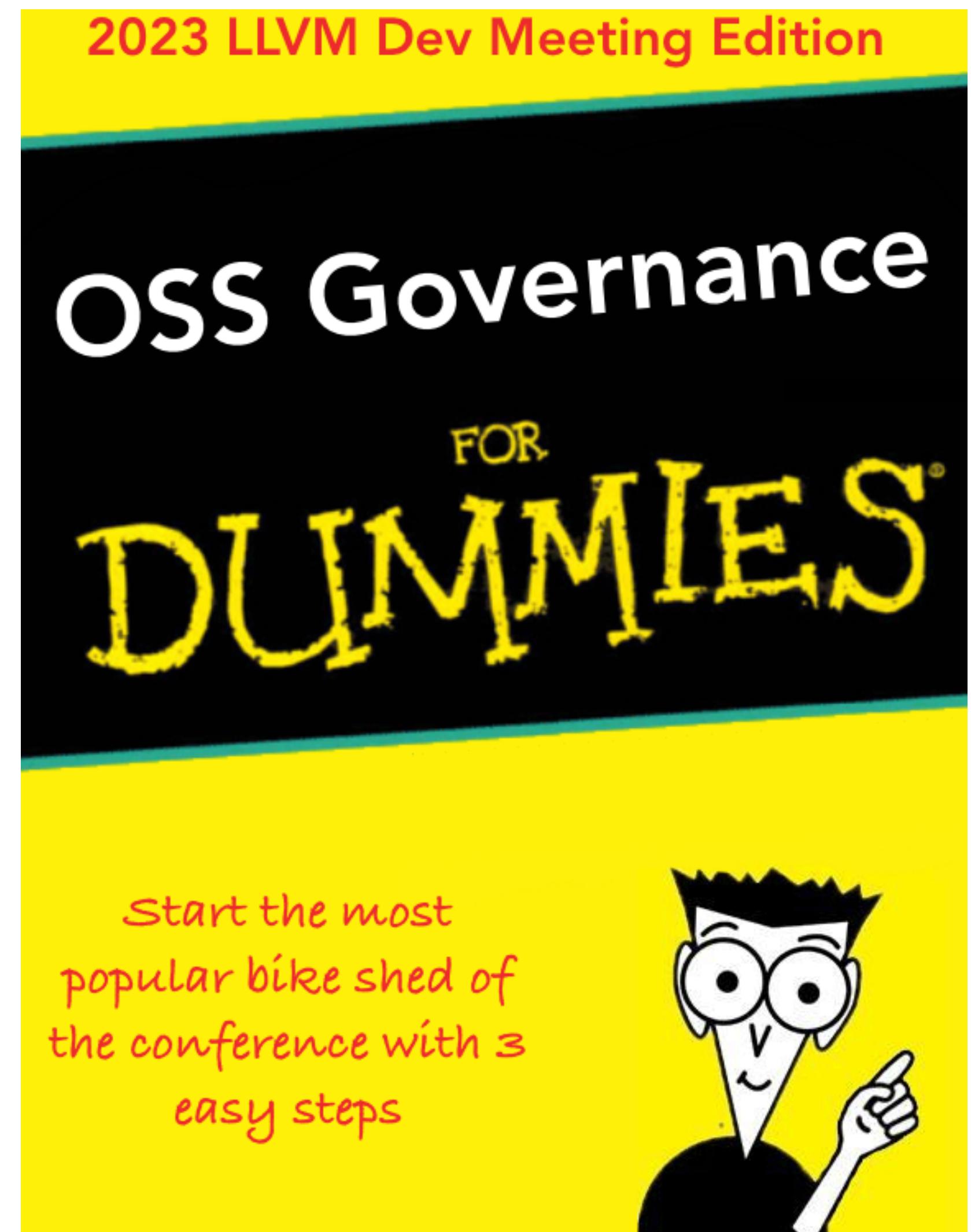


A Proposal for Governance

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US LLVM Developer Meeting 2023

Agenda

- Who am I?
- What do I mean by governance?
- Why do we need governance?
- What are other communities doing?
- What is the proposal?



About Me

- I have been contributing to LLVM since 2013
- I've made both big and small changes to LLVM
- I've been on the winning side and losing side of disagreements
- I care deeply about LLVM



What is Governance?

- A set of policies and structures
- Goals to ensure smooth operations and long-term health
- Focus areas:
 - Decision making
 - Accountability
 - Oversight
- Should not change the day-to-day



Tearing at the Seams

- Our processes worked when we all fit in a bar in Mountain View
 - Increased in size and geographically dispersed
 - Big changes are getting harder
 - More and more things are falling through the cracks



Decision Making Issues

- Contributor burnout
- Decreased support from corporate management
- Lower threshold to forking
- Fragmented ecosystem



Accountability Issues

- Systemic and infrastructural issues linger
 - Out of date or missing code owners
 - Gaps, grey areas, and inconsistencies in Developer Policy
 - Barrier contributions



Oversight Issues

- Chris Lattner as BDFL hasn't been realistic for years
- Code Owners step in, but lack clear authority
 - When Code Owners make big decisions, the backlash can be huge
- Governance by loudest voice or last person standing



I'm not the BDFL!



He's the BDFL!

Is There a Better Way?

- *spoiler alert* YES!
- We can learn a lot from other communities
- Focused on three:
 - Apache
 - Python
 - Rust



Apache

- Apache is a federation of projects
- Each project can set their own policies
- All projects follow The Apache Way
 - The Apache Way is a loosely defined contract of governance



The Apache Way

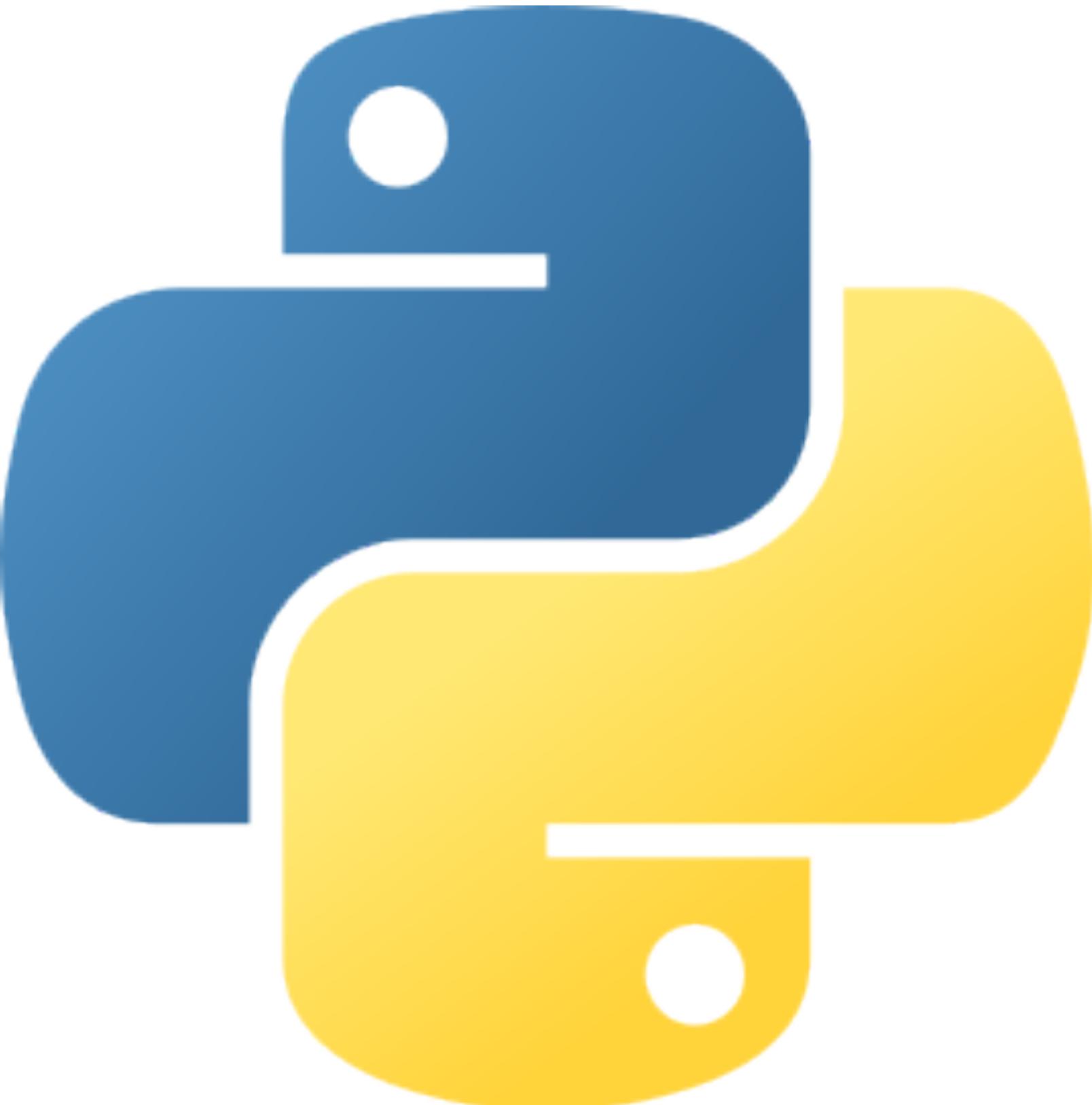
- Earned Authority: all individuals are given the opportunity to participate, but their influence is based on publicly earned merit – what they contribute to the community.
- Community of Peers: individuals participate at the ASF, not organizations. The ASF's flat structure dictates that roles are equal irrespective of title, votes hold equal weight, and contributions are made on a volunteer basis (even if paid to work on Apache code).
- Open Communications: as a virtual organization, the ASF requires all communications related to code and decision-making to be publicly accessible to ensure asynchronous collaboration, as necessitated by a globally-distributed community.
- Consensus Decision Making: Apache Projects are overseen by a self-selected team of active volunteers who are contributing to their respective projects.
- Responsible Oversight: The ASF governance model is based on trust and delegated oversight. Rather than detailed rules and hierarchical structures, ASF governance is principles-based, with self-governing projects providing reports directly to the Board.
- Independence: the ASF is strictly vendor neutral.
- Community Over Code: the maxim "Community Over Code" is frequently reinforced throughout the Apache community, as the ASF asserts that a healthy community is a higher priority than good code.
- <https://www.apache.org/theapacheaway/>

Apache Lessons for LLVM

- We're a tighter knit group of projects
 - We need a more consistent process
- Similar community values
 - Codifying values in writing is good

Python

- Governance came from within the Python core team
 - The core team is small...
- Python's community shape is very different from LLVM
 - Small number of core developers evolving python
 - Huge number of users
- Built around an evolving decision making process
- Elected leadership



Python Steering Council

- Replaced Guido when he stepped down as BDFL
- Structure defined by a PEP, and voted to adopt
- Steering Council members are elected by the core team

Python Lessons for LLVM

- Formalized process for decision making
- Elections for project representatives
 - ~30:1 ratio of core team members to elected positions
 - For LLVM that would be ~60 elected positions
 - Single team structure is untenable for LLVM

Rust

- Mozilla shaped Rust's governance
- Started with a core team of Mozilla engineers
- Rust's governance has been rocky



Rust Teams

- Teams with specific areas of responsibilities overseen by a Core Team
- Initially formed of Mozilla employees, became volunteer
 - Lacked clear process for changing membership
- In 2020, issues with team membership and accountability became huge problems
 - Culminated in the entire Rust moderator team resigning in 2021
- Adopted a new leadership council this year

Rust Leadership Council

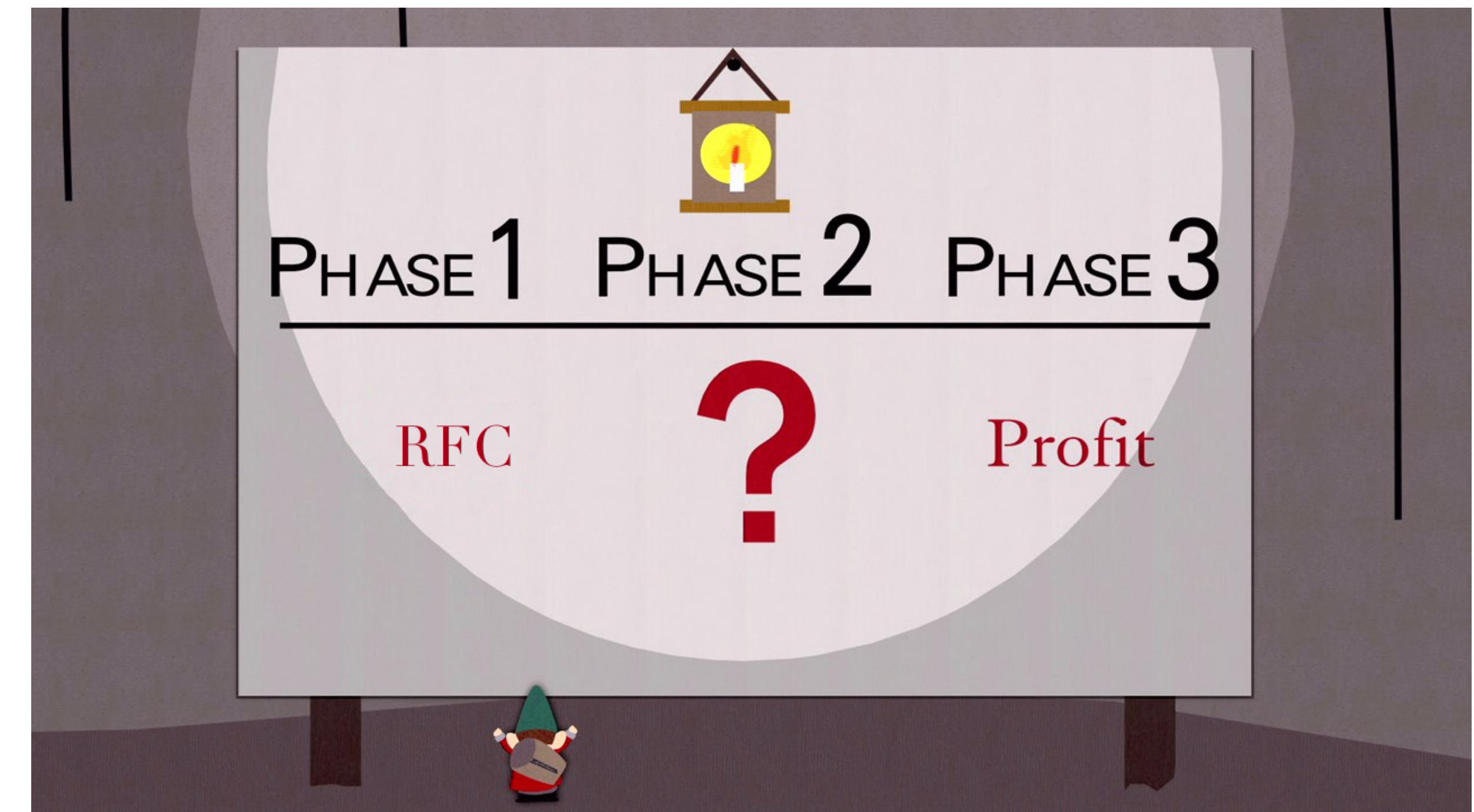
- Comprised of representatives from each top-level team
- Focus is on identifying, prioritizing and delegating things that fall outside the teams
- Coordinates cross-team efforts
- Wide reaching oversight and accountability responsibility

Rust Lessons for LLVM

- Formalized process for decision making
- Hierarchy of teams
- Accountability and oversight are a big deal!
 - The community needs to have a voice
 - Focused on facilitation rather than doing work

A Solution for LLVM

- Define core values of the community
- Builds off LLVM Decision Making Process
 - <https://github.com/llvm/llvm-www/blob/main/proposals/LP0001-LLVMDecisionMaking.md>
- Create a set of elected Area Teams to oversee parts of LLVM
- Create a Project Council of representatives from the Area Teams
- Define the relationship between the LLVM Foundation and the LLVM Governance bodies



Core Values

- Community of peers
- Respect is given freely
- Authority is earned
- Public communication
- Community over code
- Broad definition of contribution



Code of Conduct

- All governance is subject to the CoC
- Acting in bad faith or fraudulently is a CoC violation
 - Voting multiple times
 - Members of a team excluding people
- CoC violations can revoke privileges



Decision Making

- LLVM Decision Making Process is pretty good
 - Chris Lattner is a single point of failure
 - We don't use it enough
- Divest Chris Lattner as BDFL
- Embrace the process



Elections!

- Contributors elect representatives
- Voter eligibility needs to be quantifiable and automated
 - Registration
 - Measurements of community activity



Area Teams

- The mediators and final decision makers for their area
- Elect a chair from among themselves to the Project Council
- Responsible for maintenance of Code Owners files
- Do not need to be expert maintainers



Working together is always more fun

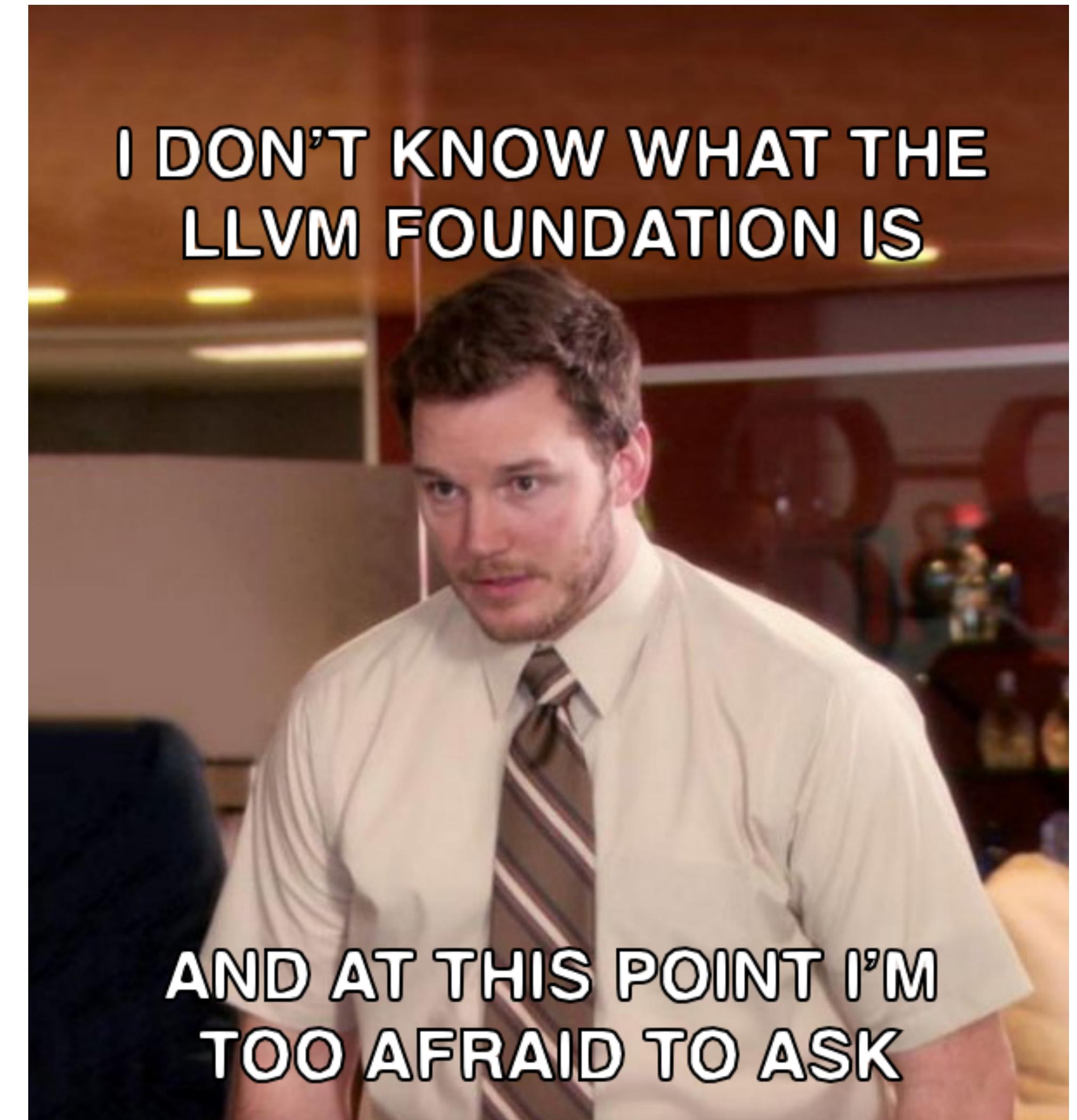
Project Council

- Broad mandate to support the community
- Prioritize accessibility, inclusivity, and sustainability
- Maintain the relationship with the LLVM Foundation
- Facilitate seeking consensus
- As a last resort, act as the final decision maker



LLVM Foundation's Role

- Controls project assets (trademarks, web domains, GitHub accounts, etc)
- Collects donations to fund operating “programs”
- Management and board get to decide how to allocate funds
- Control of assets gives influence over some decisions



Moar Details!!!

- Lots more details in the written proposal!
- Proposal is posted on GitHub
- RFC thread on Discourse



Call To Action

- I'm one voice in a community
- Provide your feedback!
- Don't like my proposal? Write your own proposal!



Thank you!

- Co-authors
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 - Kristof Beyls
 - David Blaikie
- Jonas Devliegehere
- Chris Lattner
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- Alex Rosenberg
- Guido Van Rossum
- Tom Stellard
- Many more...