Federal University of Acre

Computer Science Postgraduate Program

Distributed Software Development

Pull-based Software Development

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Agenda

- Context
- General Concept
- Pull Request Process
- Research Scenarios

Context

- Collaborative and distributed software development
  - Open-source projects usually have large development teams
  - Interest of the external community
  - Bug fixes, code refactorings, or new functionalities

General Concept

- “An emerging paradigm employed for the systematization of contributions in opensource projects is named pull request”.

(Chacon, 2009)

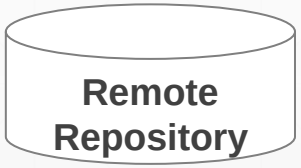
- According to this paradigm, developers can make isolated modications in artifacts and then request the integration of their modications into the project main repository.

(Soares, 2017)

Pull Request Process

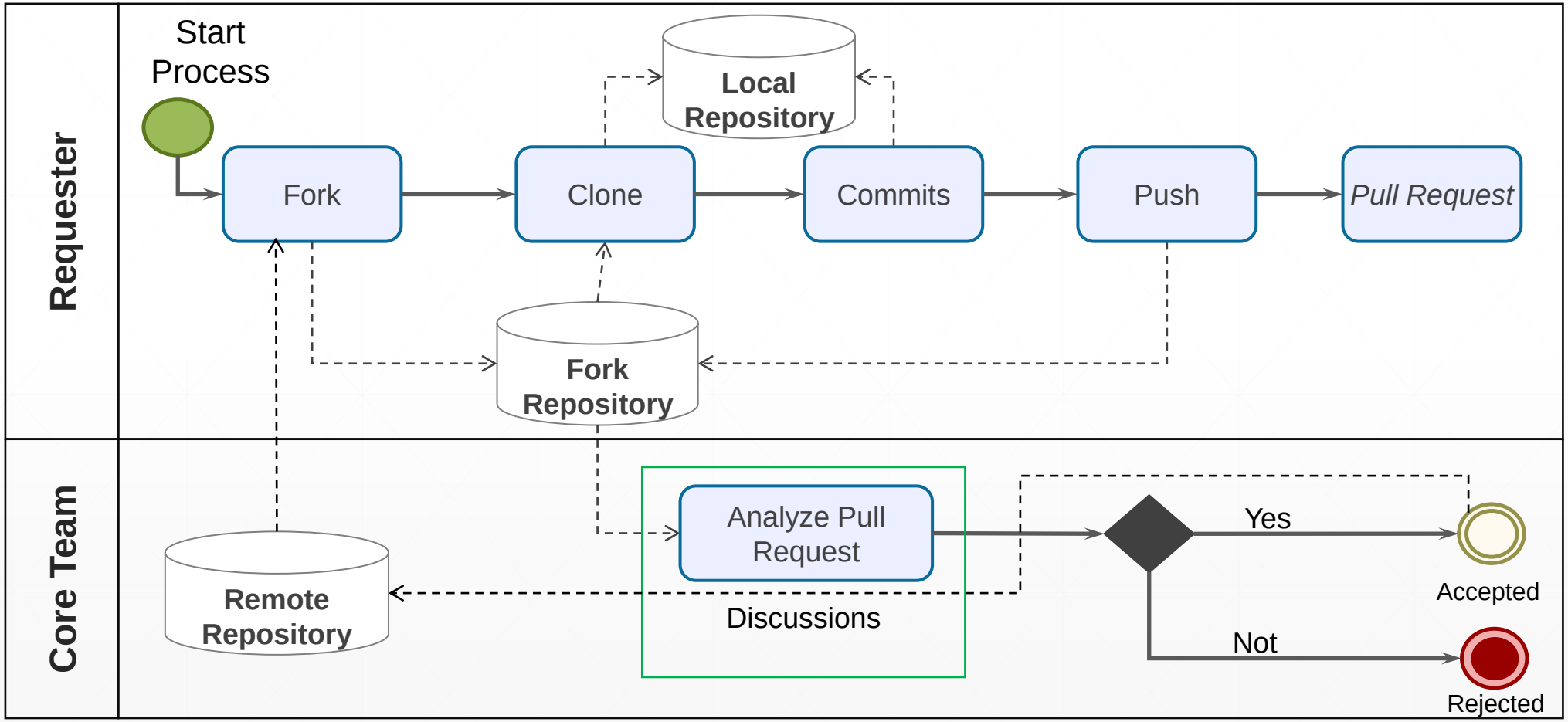
- Who can directly change the remote repository?

Core team members

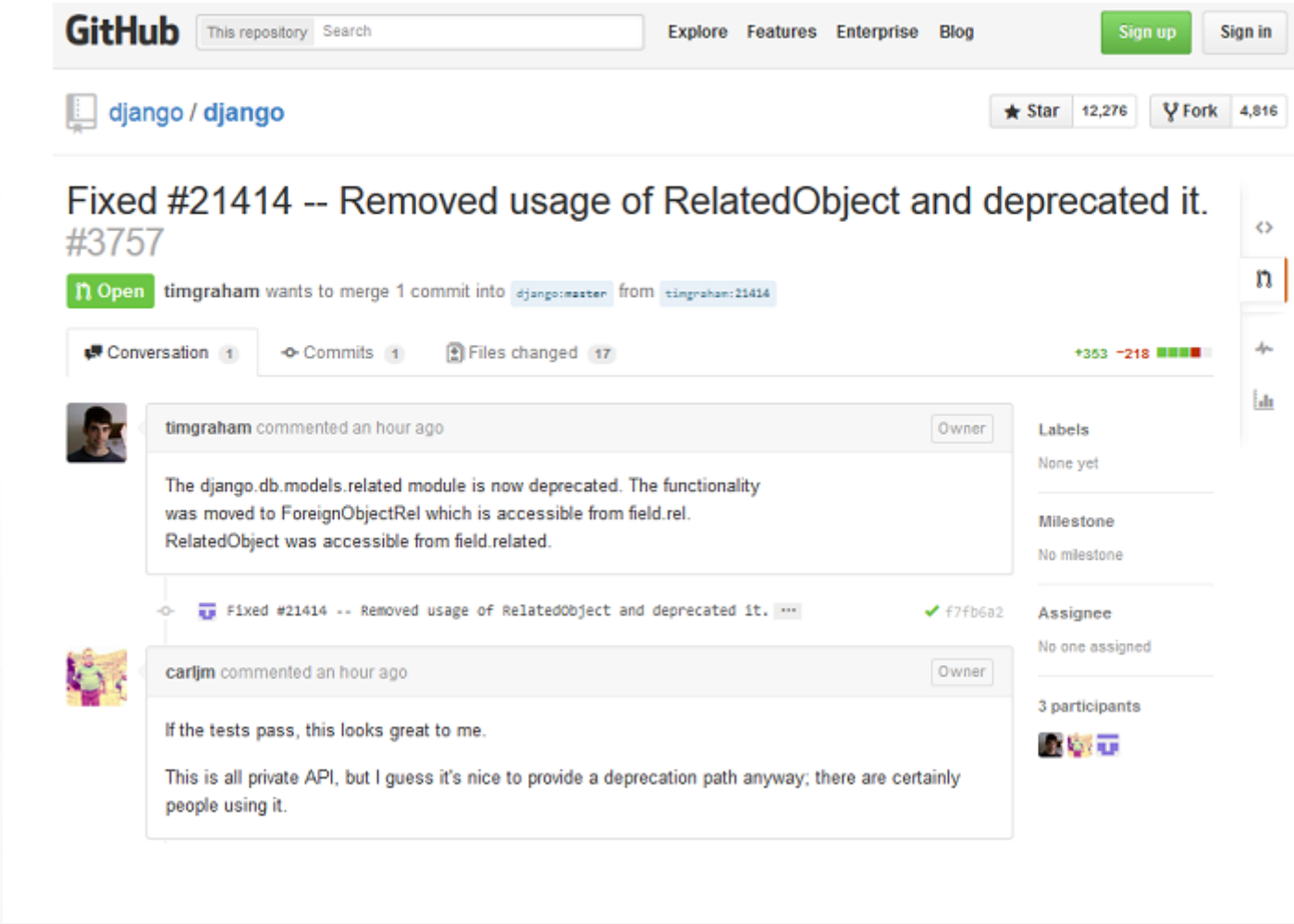


External developer's

Pull Request Process



PR Discussion



Workflow Model

- (1) Forking the main repository
- (2) Cloning the forked repository
- (3) Changing the artifacts via commits
- (4) Pushing the changes to the forked repository
- (5) Requesting the incorporation of the changes into the main repository by a pull request
- (6) Analyzing and discussing about the changes
- (7) Accepting or rejecting the pull request

Why core team members submit pull requests?

- Force peer review
- Code quality
- Democratization of the code

Current Research Scenarios

- Acceptance of Pull Requests
- PRs Lifetime
- Reviewer Assignment

Questions?