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Source Code Management / Version Control Systems

Everything you would ever want to know

Josef “Jeff” Sipek

What's SCM/VCS?

- Source Code Management
- Version Control Systems

What can it do?

- Keep revision history

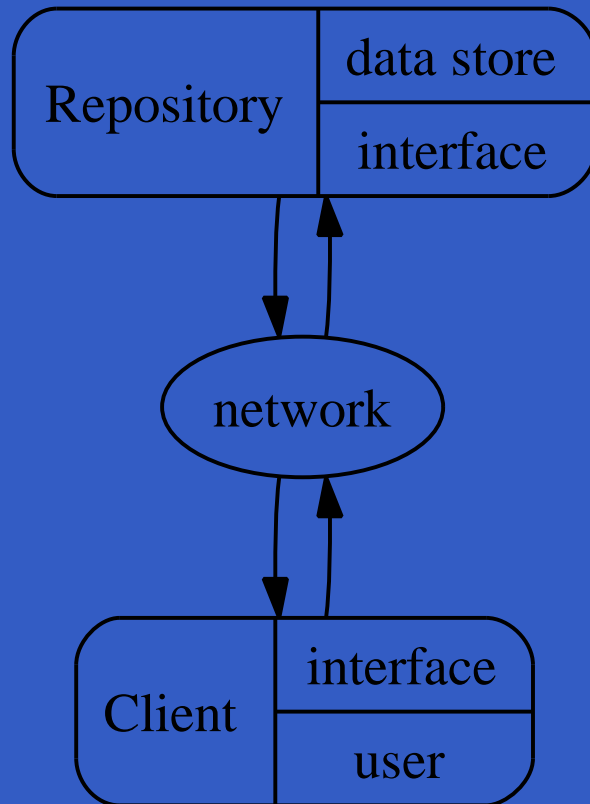
What can it do?

- Keep revision history
- Revert to any revision

What can it do?

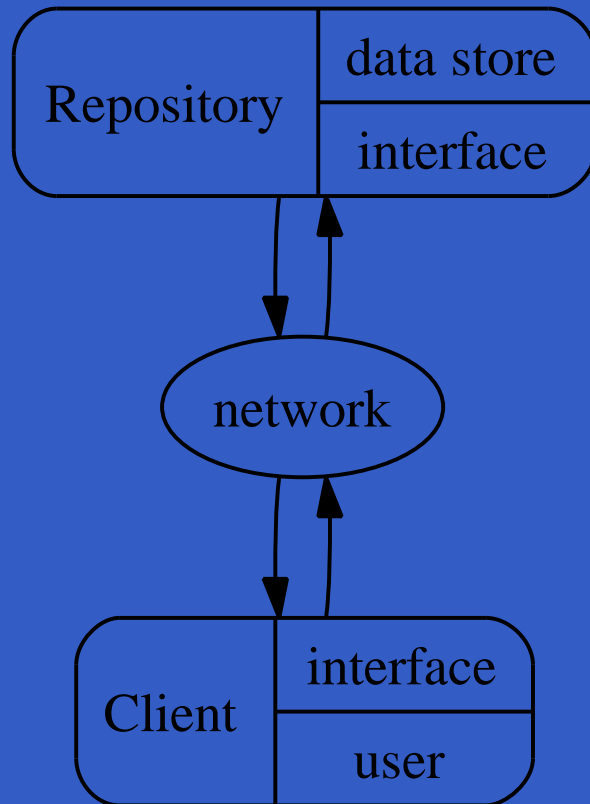
- Keep revision history
- Revert to any revision
- Track down who changed particular line of code

How does it work?



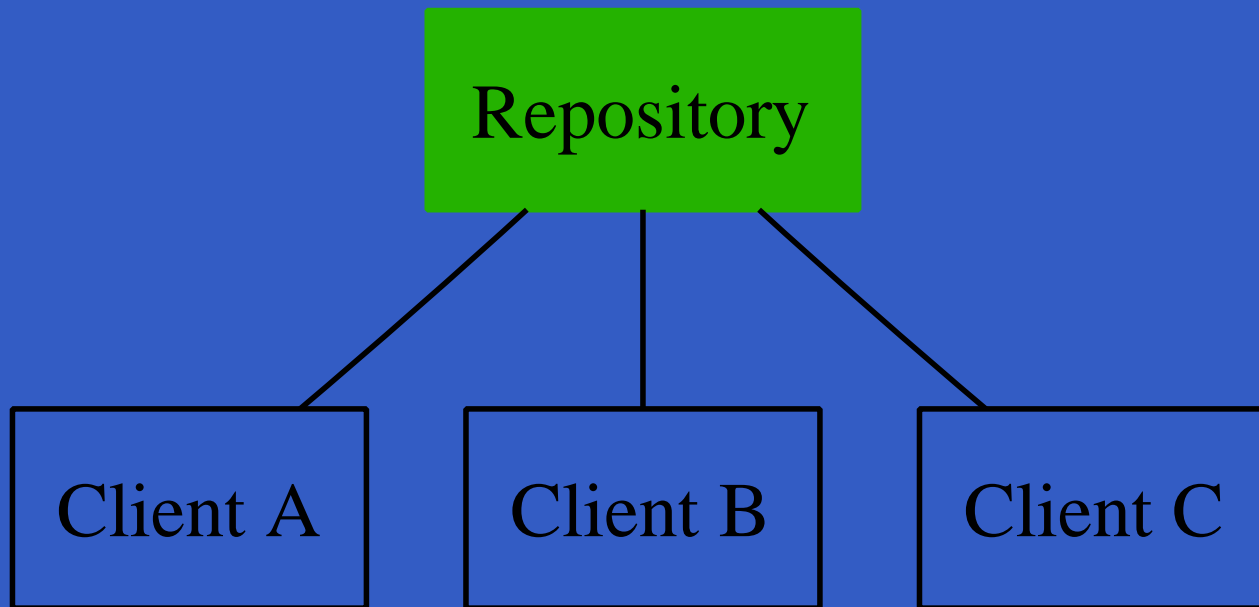
- Repository

How does it work?

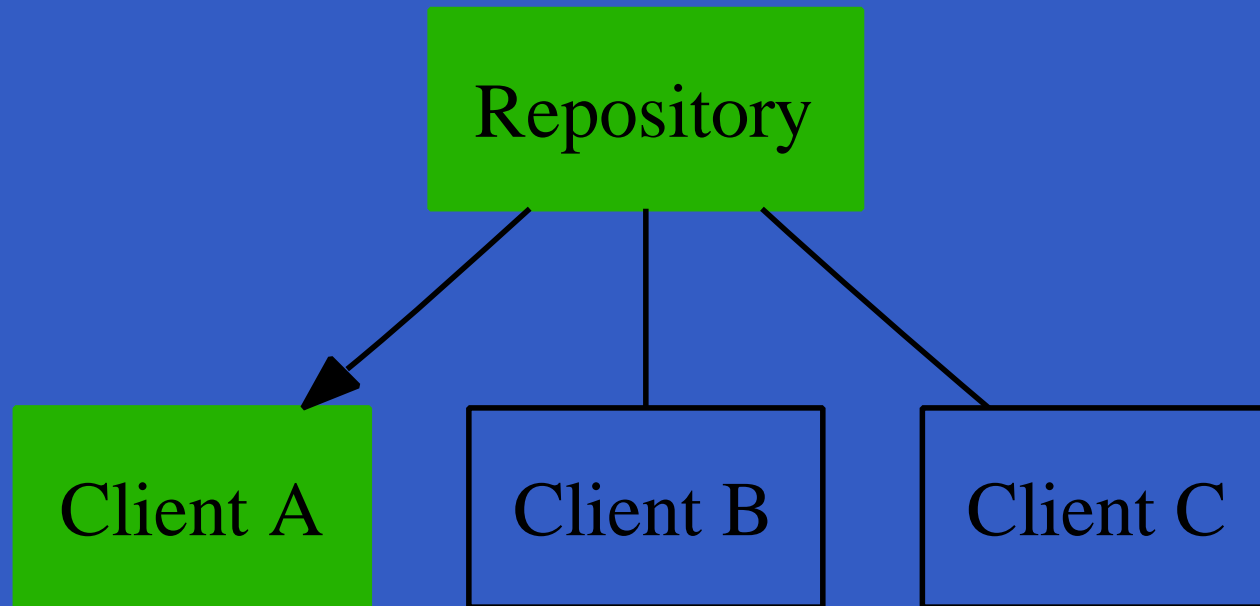


- Repository
- Client

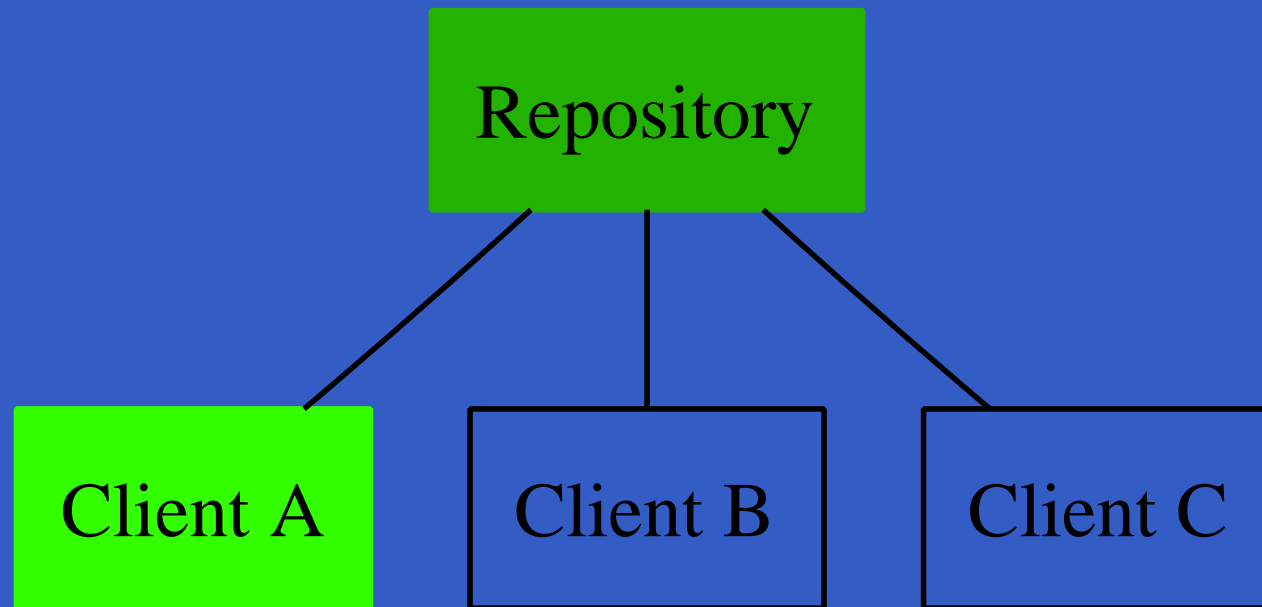
Workflow Example



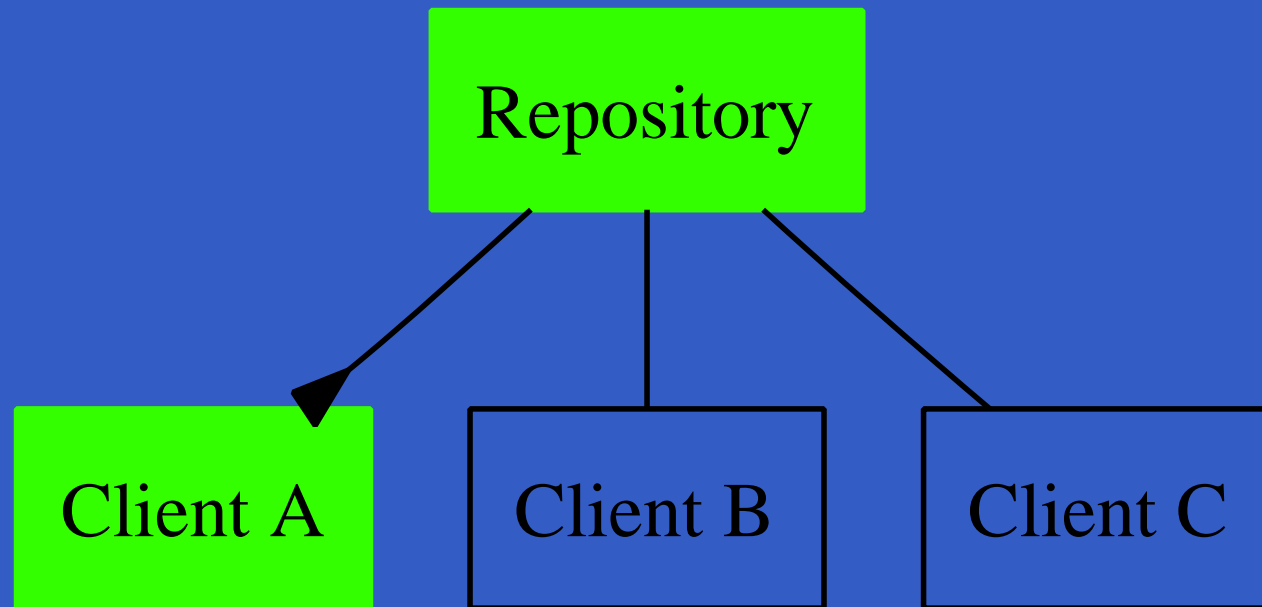
Workflow Example



Workflow Example



Workflow Example



Issues

- Non-committers are *second class citizens*

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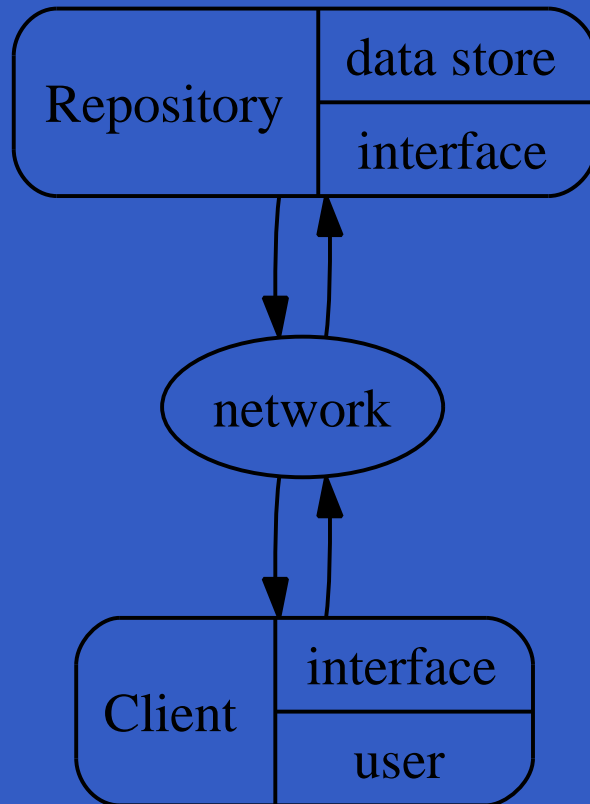
Issues

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- Minimal disconnected operation

Issues

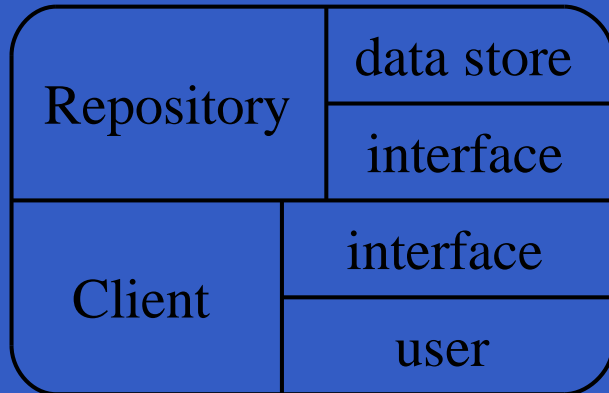
- Non-committers are *second class citizens*
- Promotes use of patches - bad!
- Minimal disconnected operation
- Single point of failure

What now?



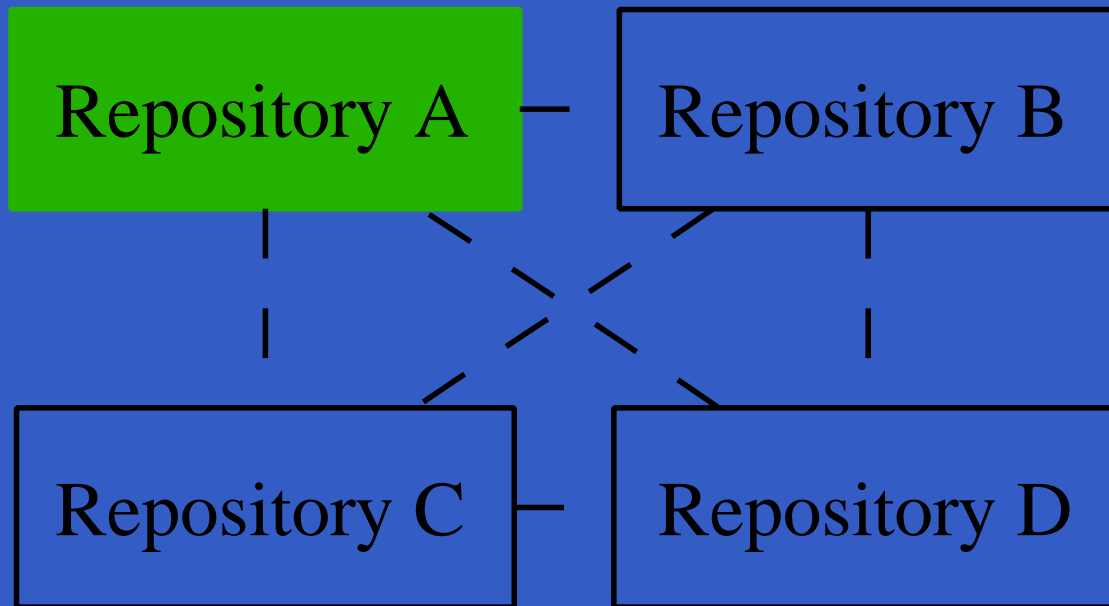
- Repository
- Client

What now?

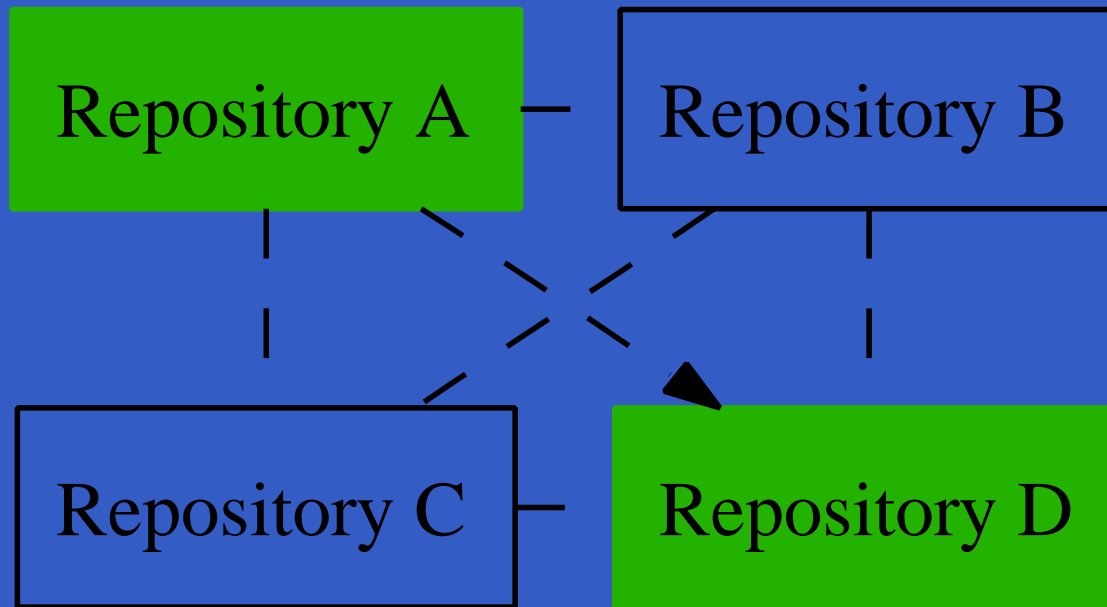


- Repository + client

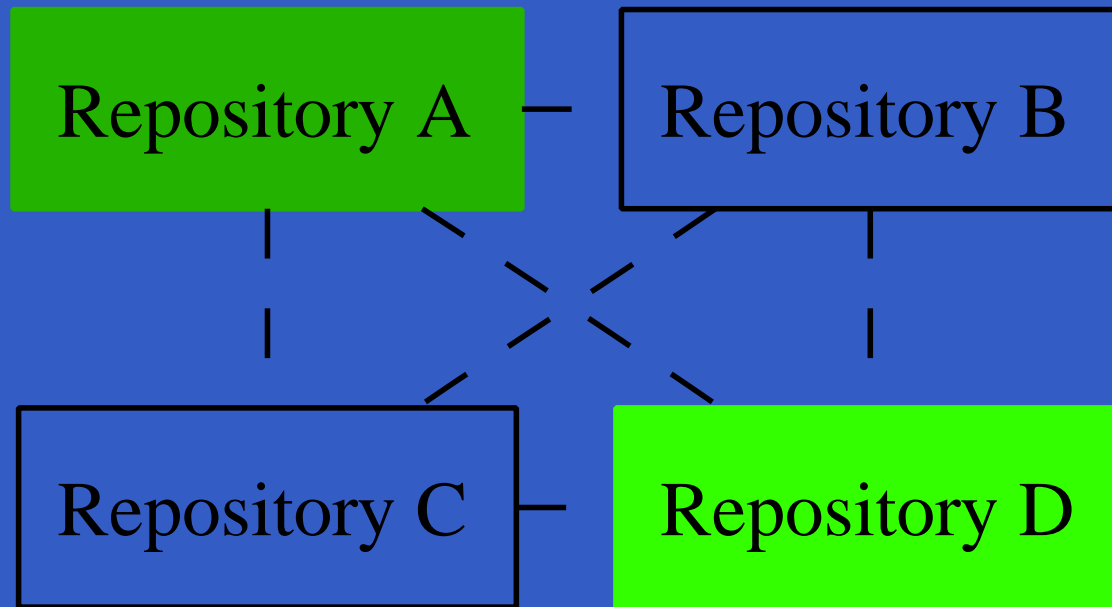
Workflow Example



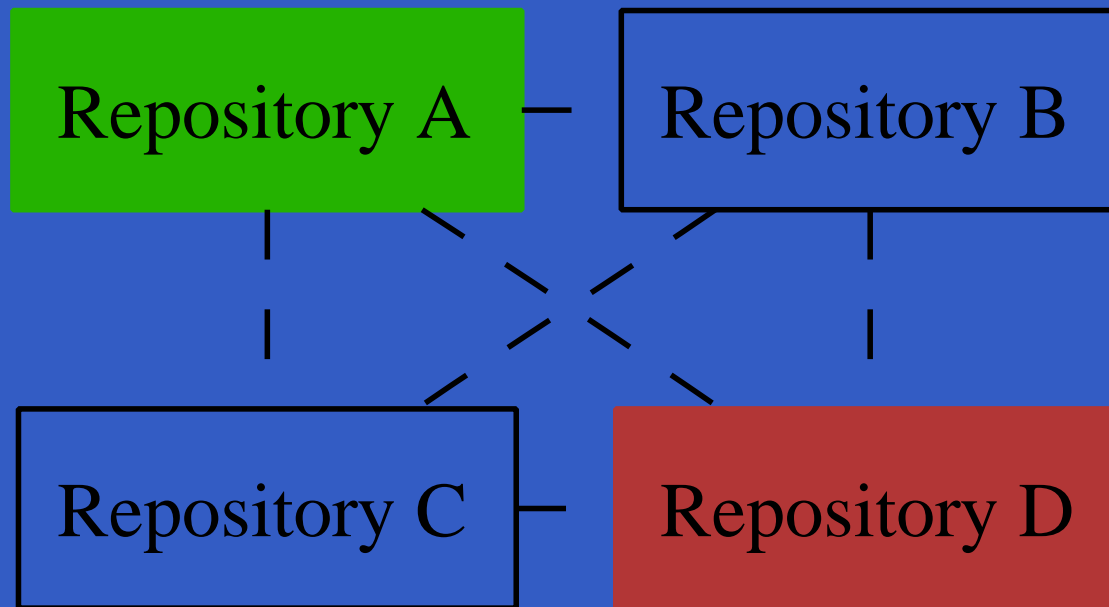
Workflow Example



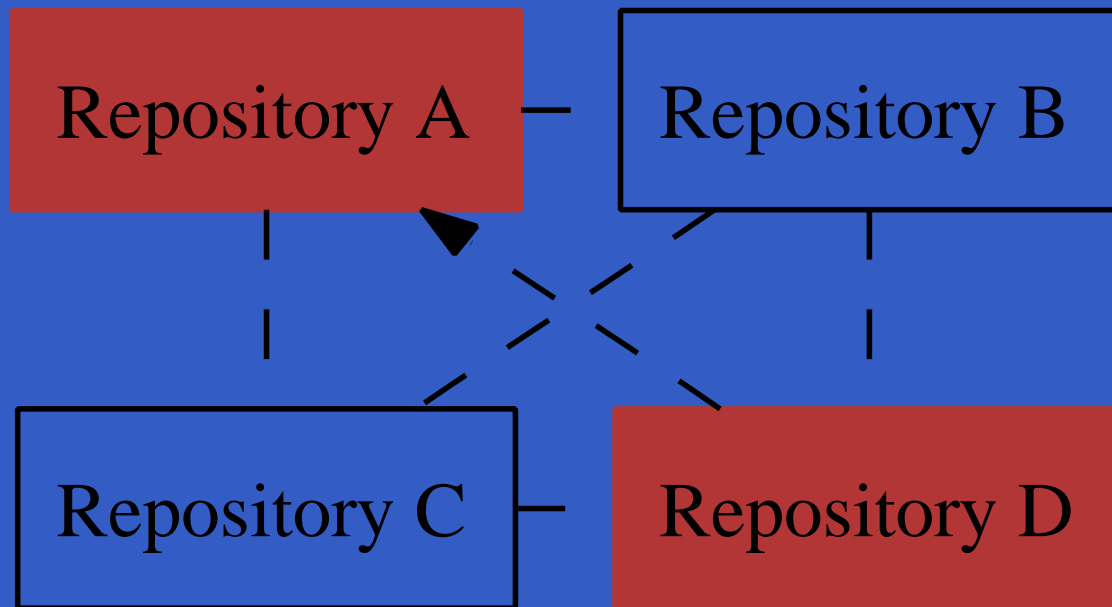
Workflow Example



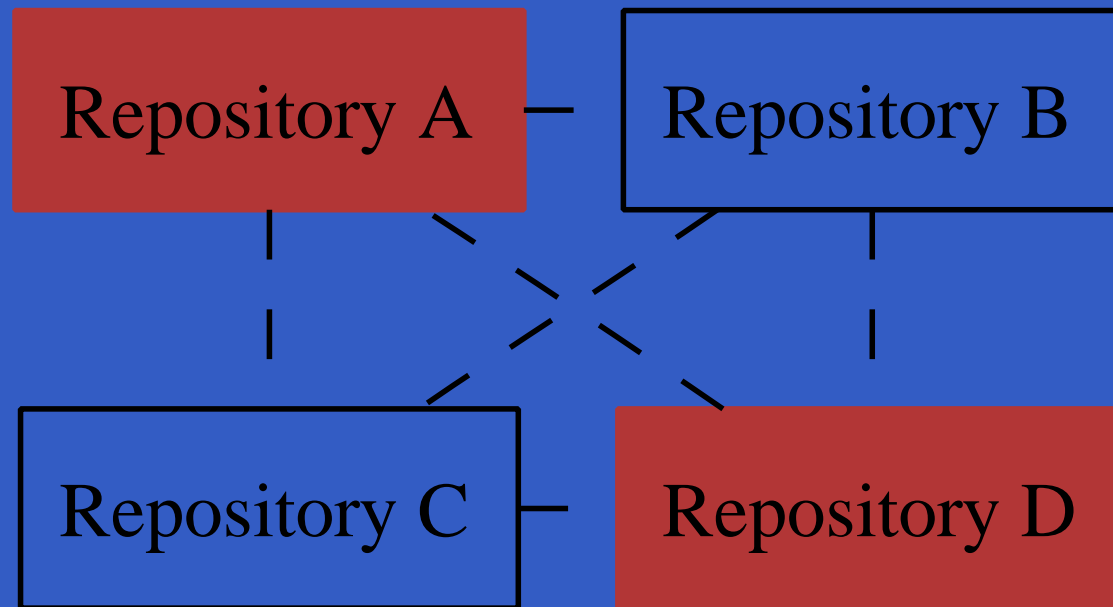
Workflow Example



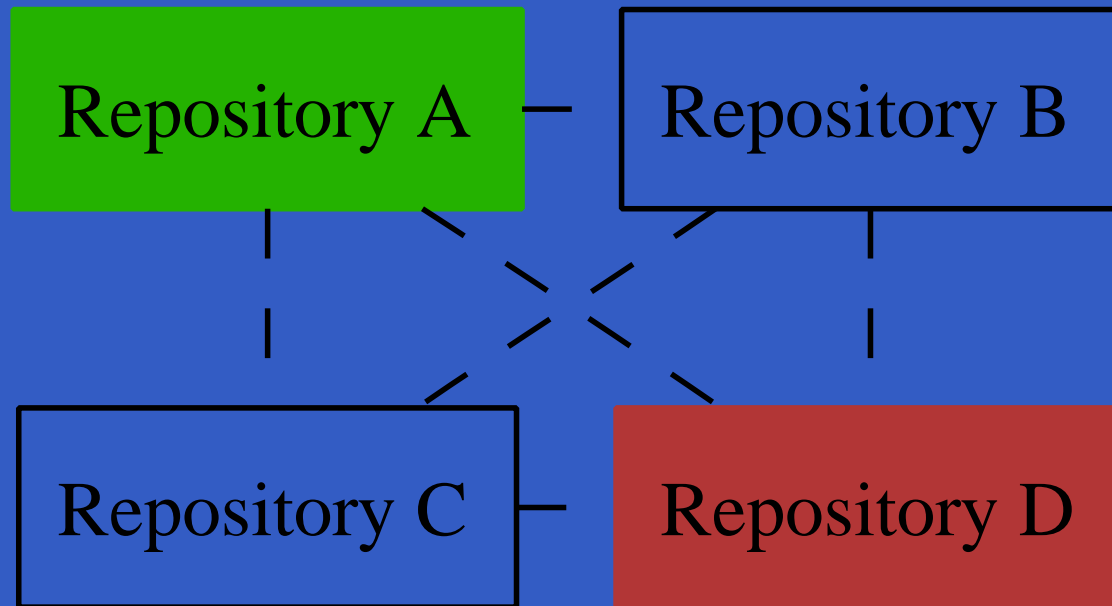
Workflow Example



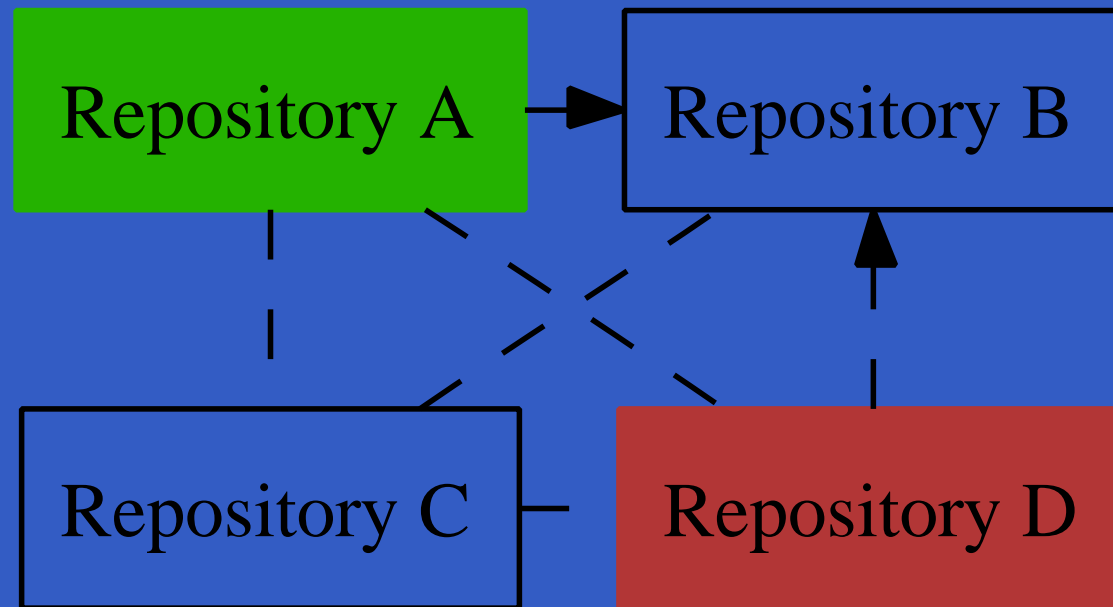
Workflow Example



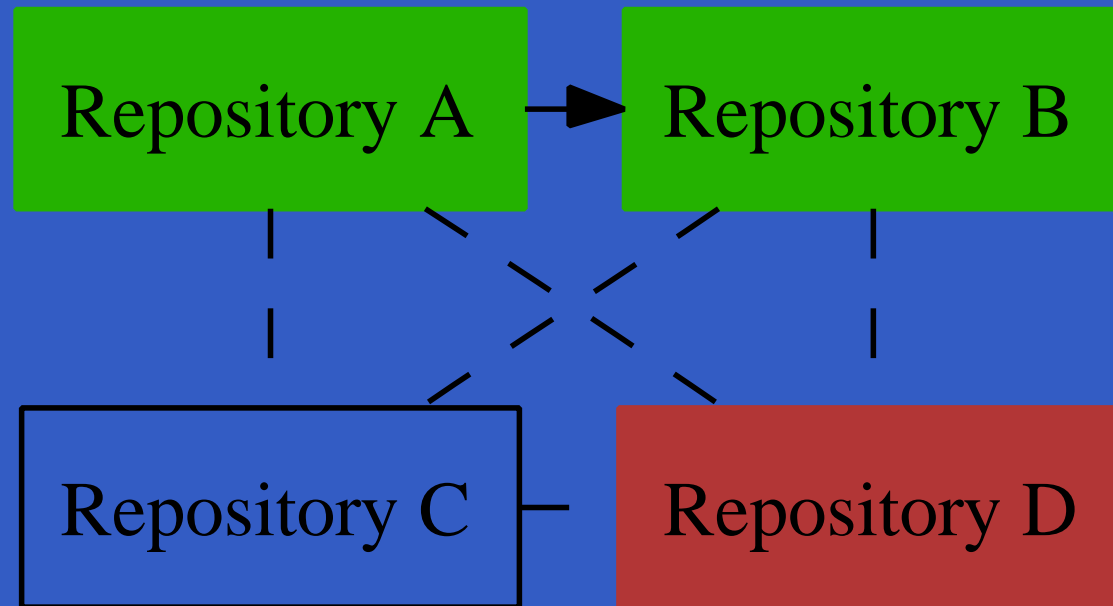
Workflow Example



Workflow Example



Workflow Example



Issues

- Slightly more complicated to understand

Issues

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- More disk usage

Centralized Systems

- RCS
- CVS
- Subversion (aka. SVN)
- Perforce
- Clearcase
- SourceSafe (by Microsoft)

Distributed Systems

- Bazaar-NG
- Cogito/git
- Darcs
- GNU Arch
- Mercurial
- Monotone
- SVK

Q&A

Questions?