Source Code Management / Version Control Systems

Even more information than last time

Josef "Jeff" Sipek

What's SCM/VCS?

- Source Code Management
- Version Control Systems
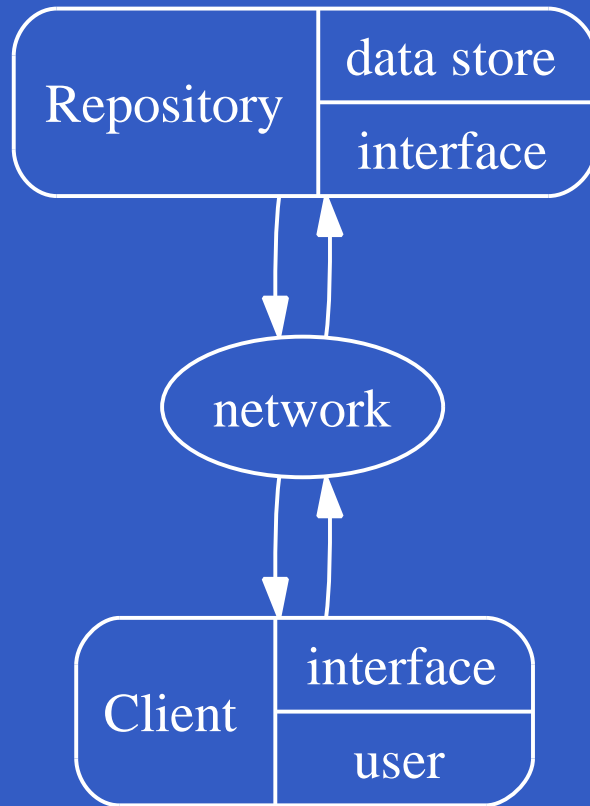
What can it do?

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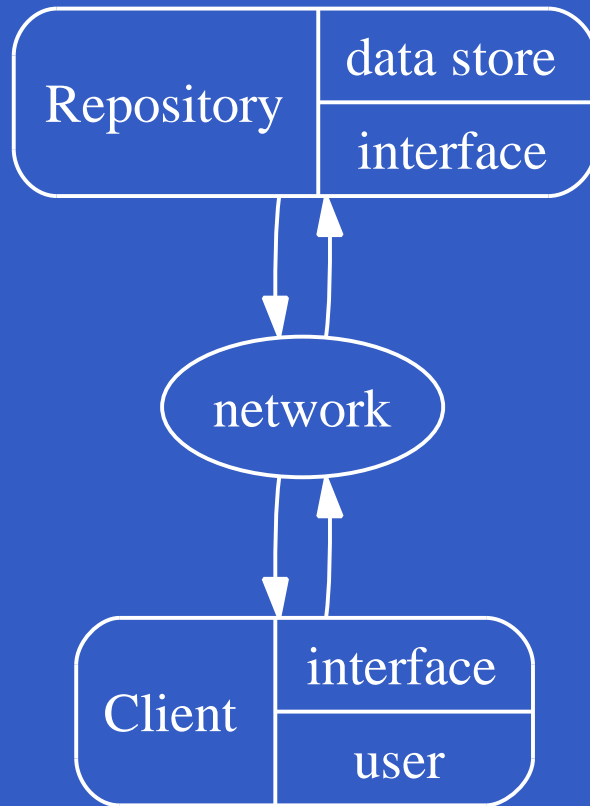- Revert to any revision

What can it do?

- Keep revision history

- Revert to any revision

- Track down who changed particular line of code
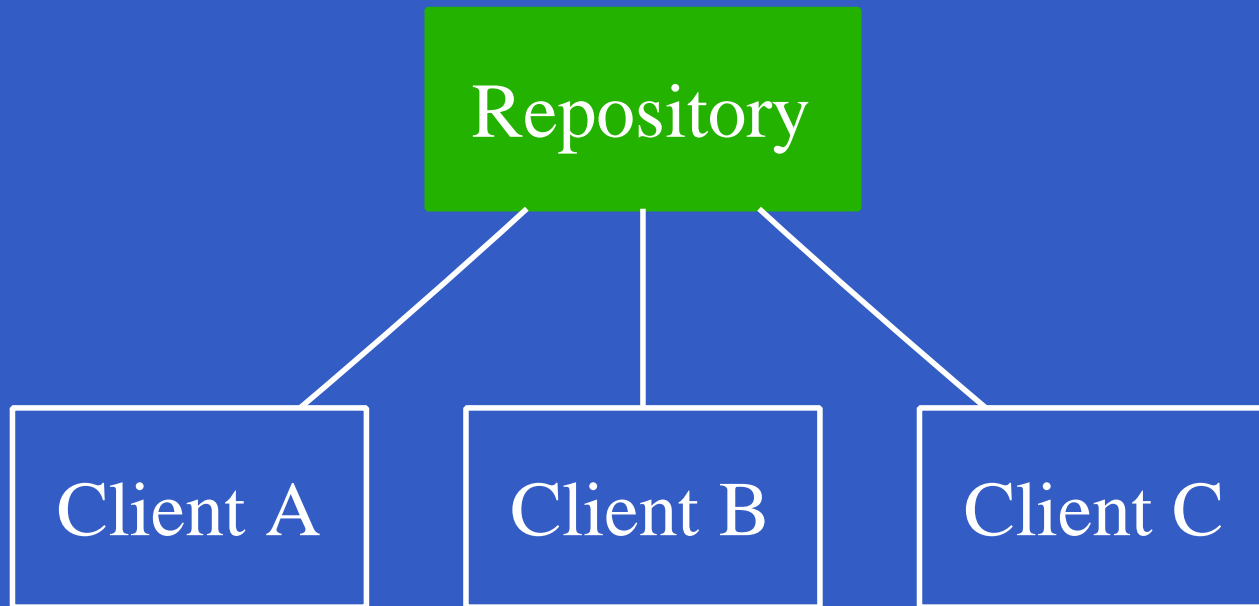
How does it work?


```
 ┌─────────────────────┐
 │            │data store│
 │ Repository ├──────────┤
 │            │interface │
 └─────────────────────┘
          ↓↑
        ╭──────╮
        │network│
        ╰──────╯
          ↓↑
 ┌─────────────────────┐
 │            │interface │
 │ Client     ├──────────┤
 │            │  user    │
 └─────────────────────┘
```

- Repository
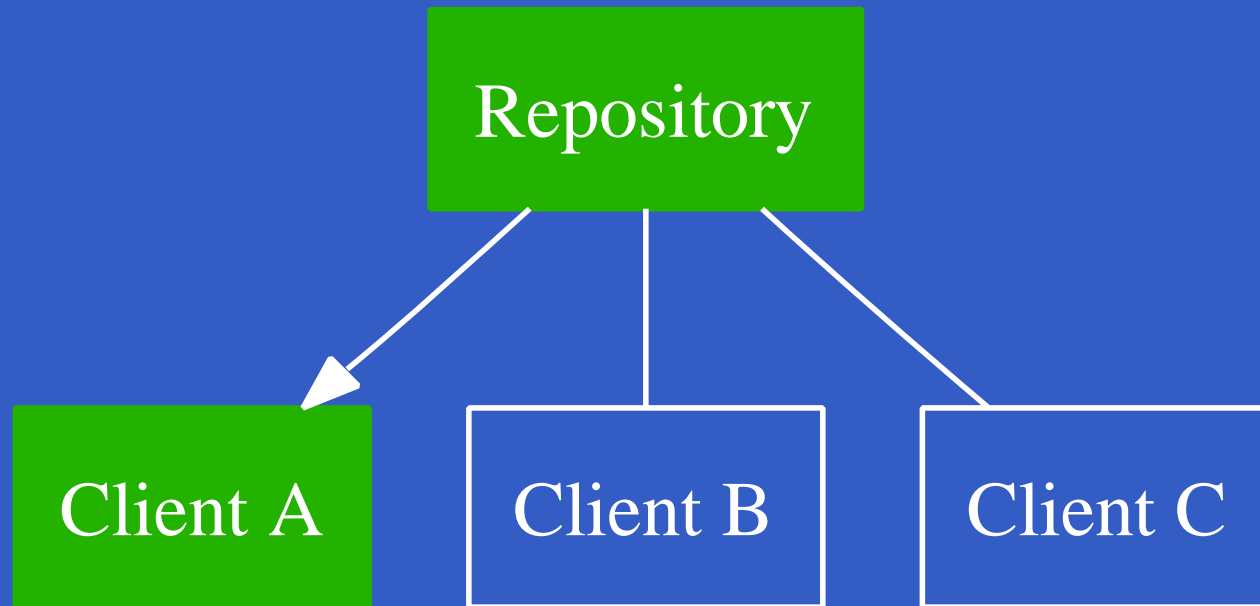
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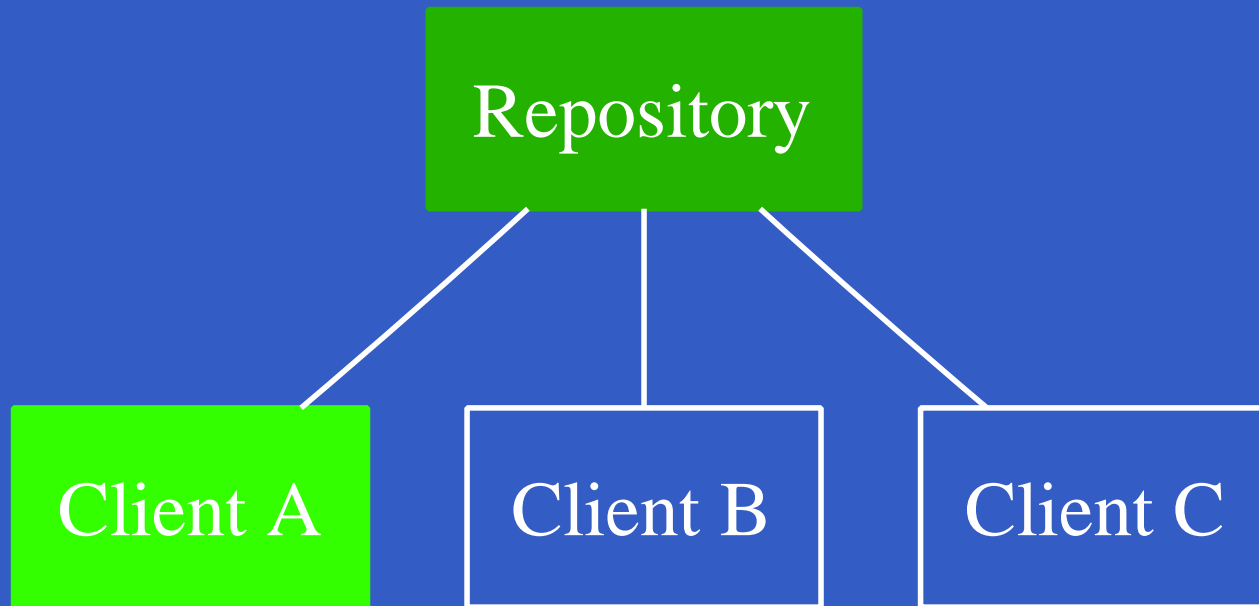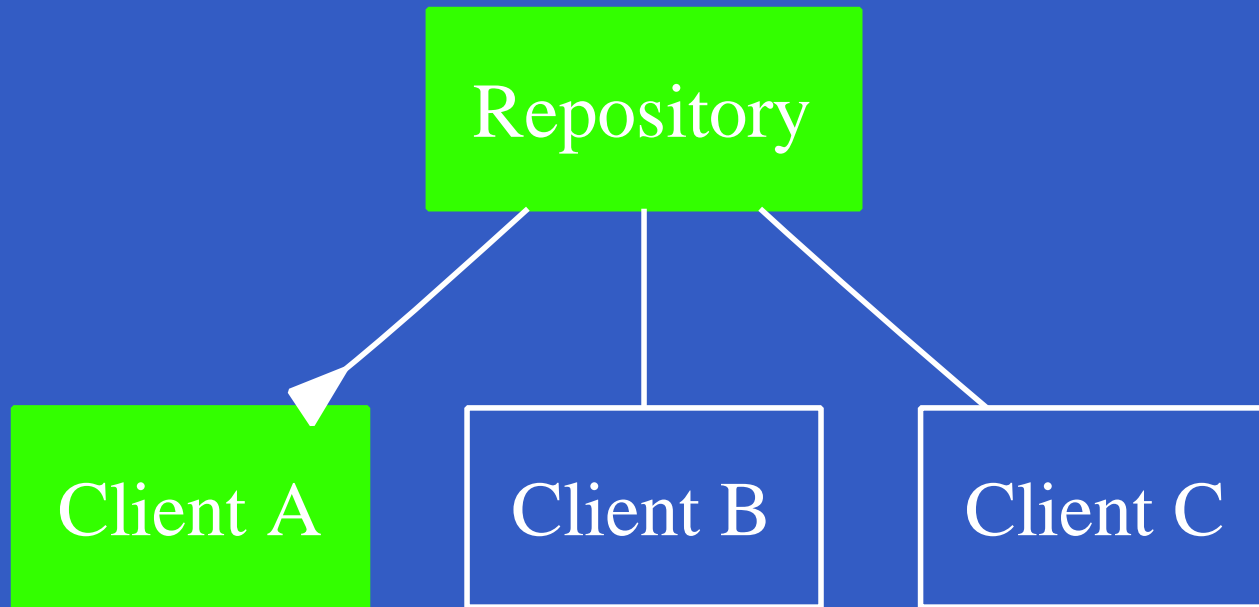- Repository
- Client

Workflow Example

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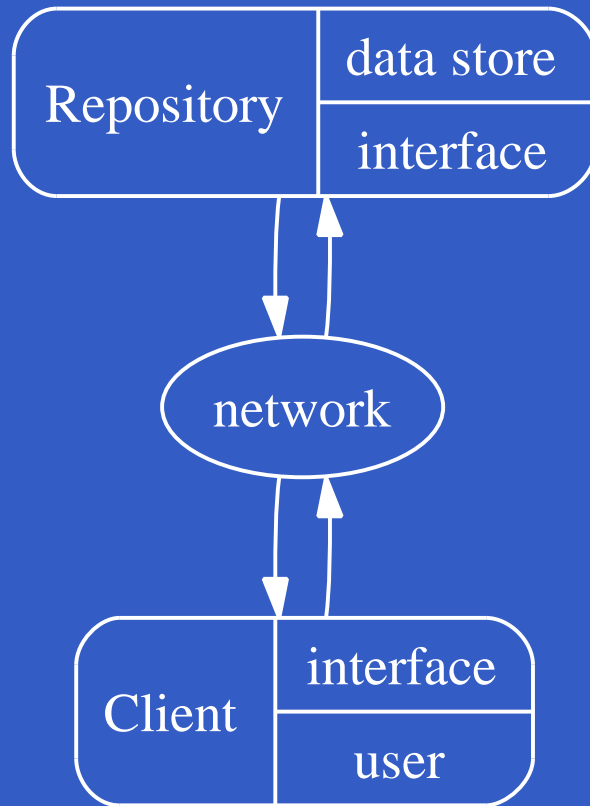- Promotes use of patches - bad!

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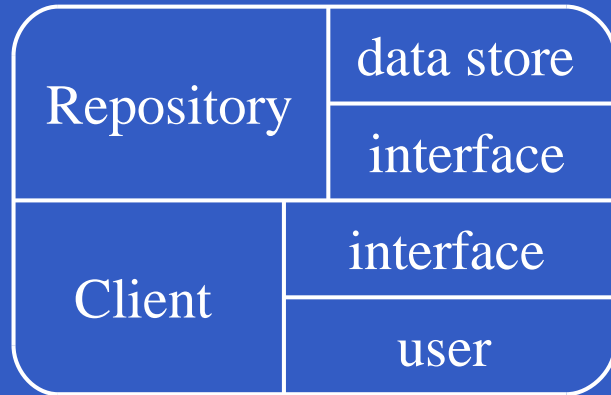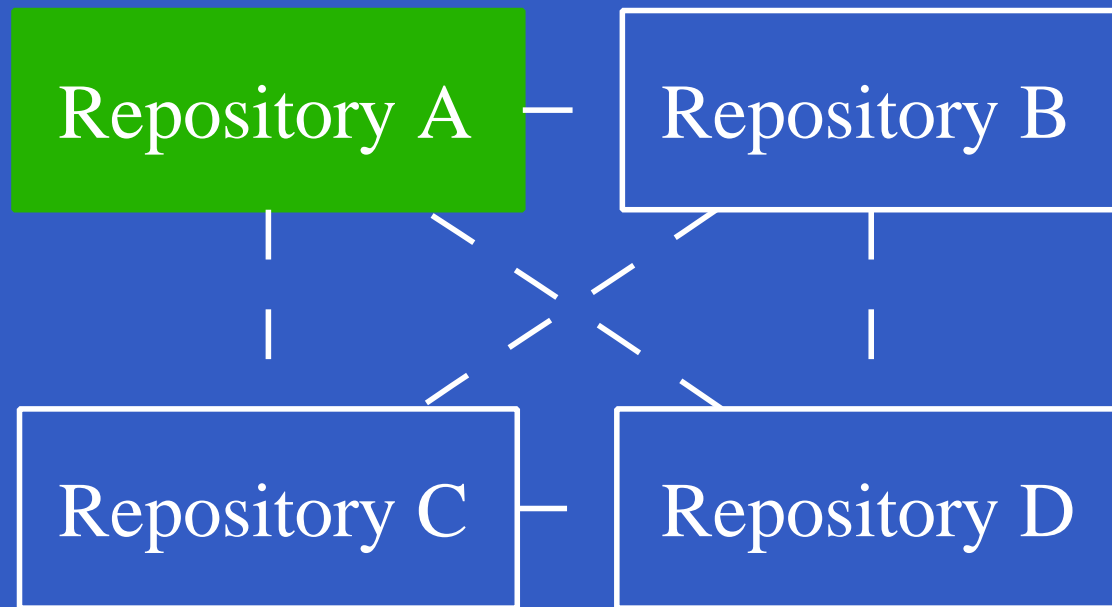- Minimal disconnected operation
- Single point of failure

What now?

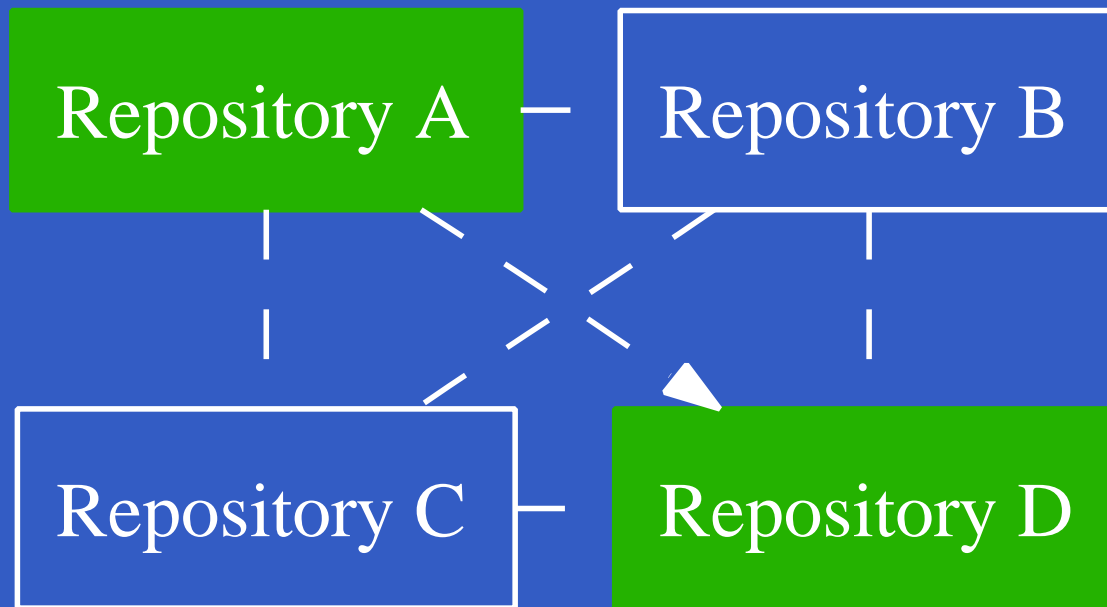- Repository
- Client

What now?

Repository	data store
	interface
Client	interface
	user

- Repository + client

Workflow Example

Workflow Example

Repository A   Repository B

Repository C   Repository D

Workflow Example

Workflow Example

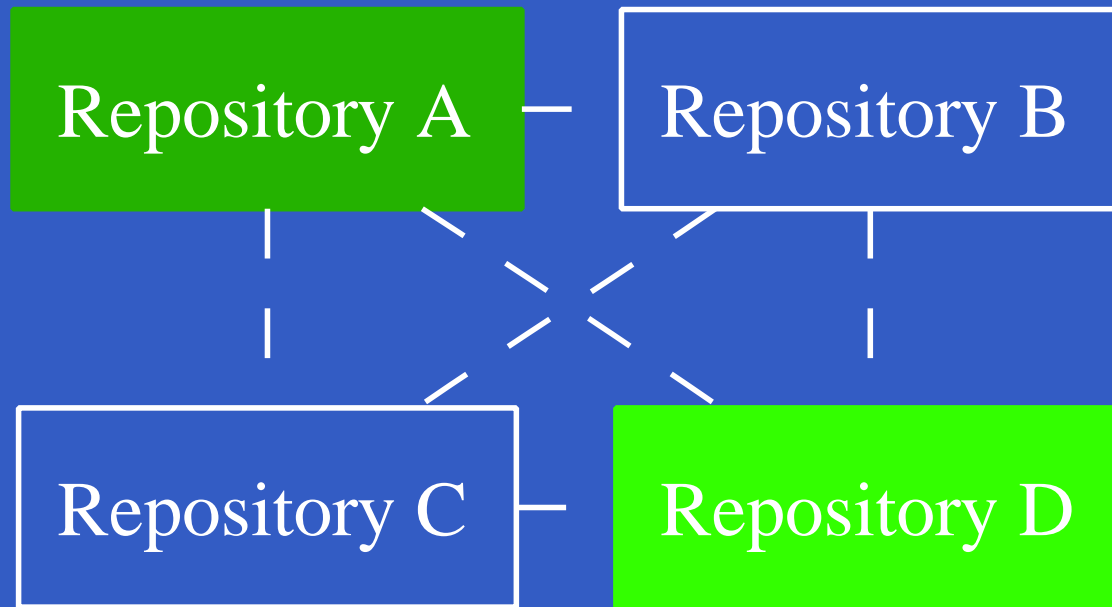Repository A — Repository B
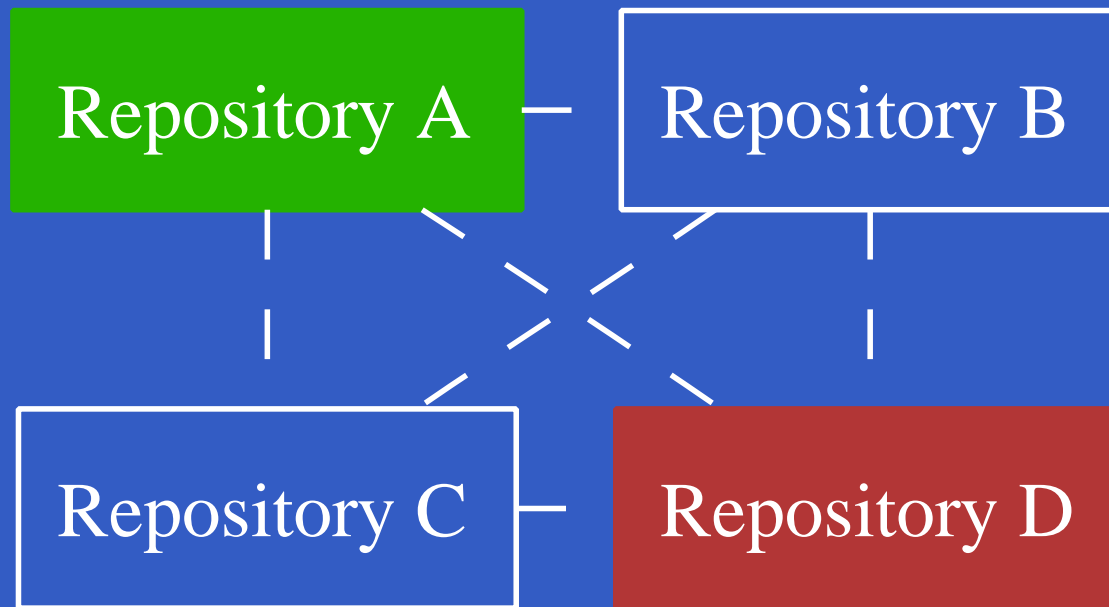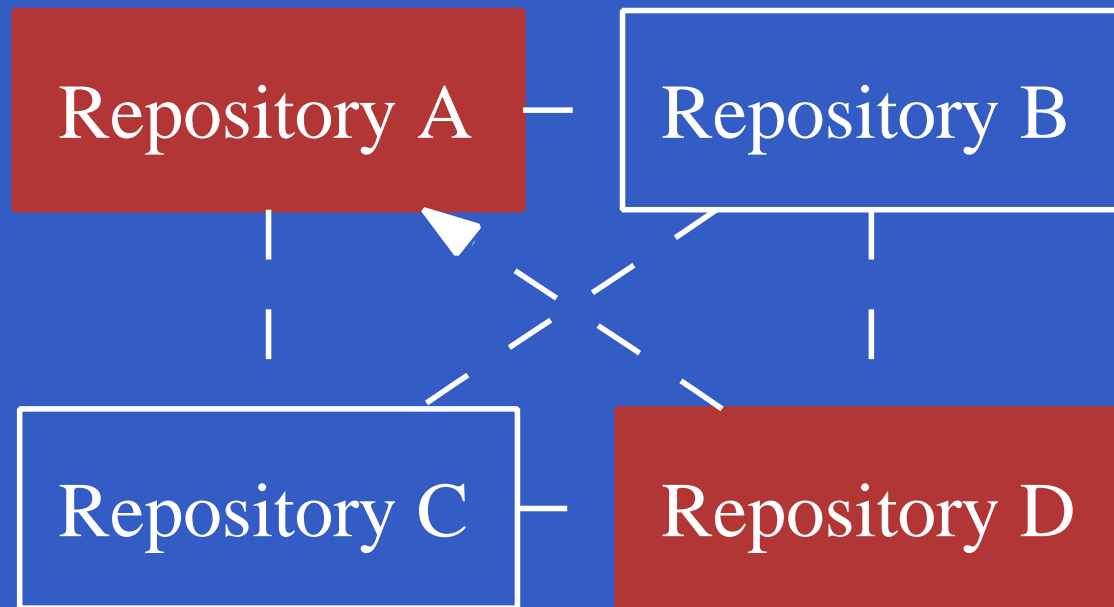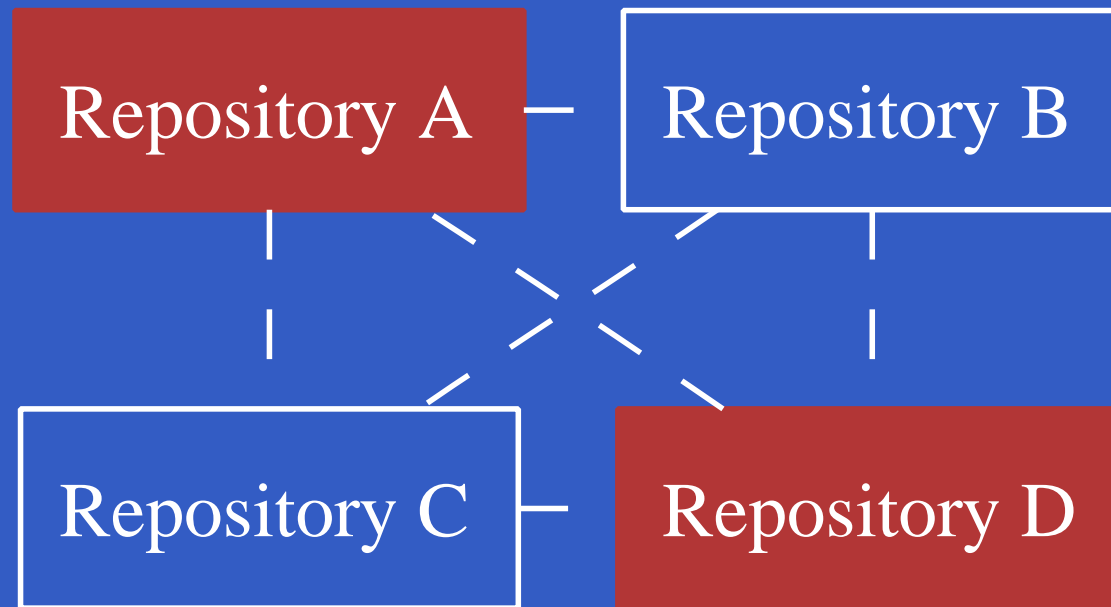
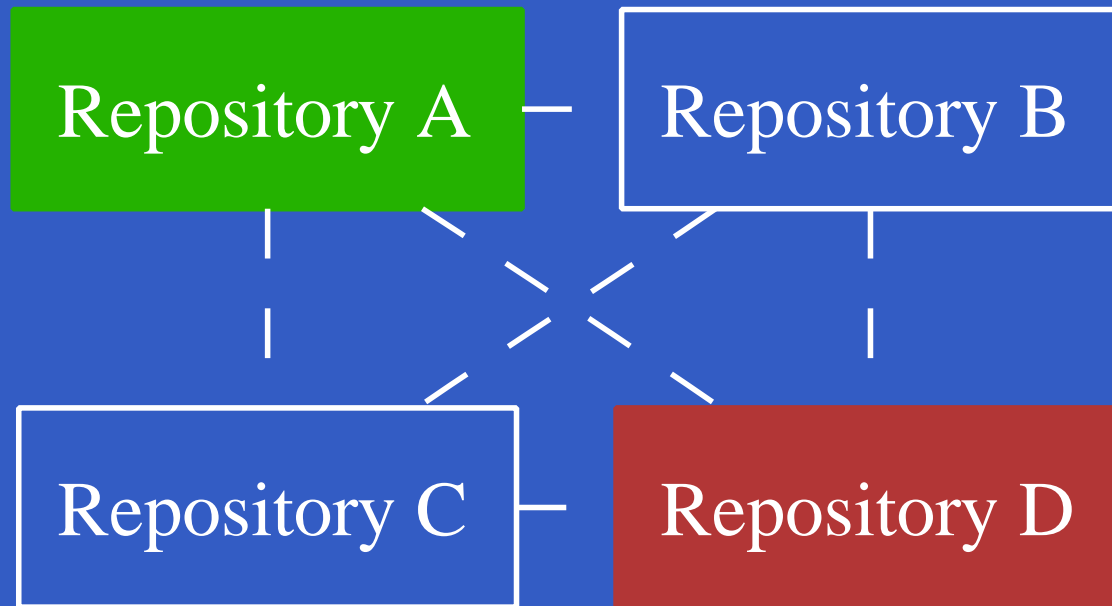Repository C — Repository D

Workflow Example
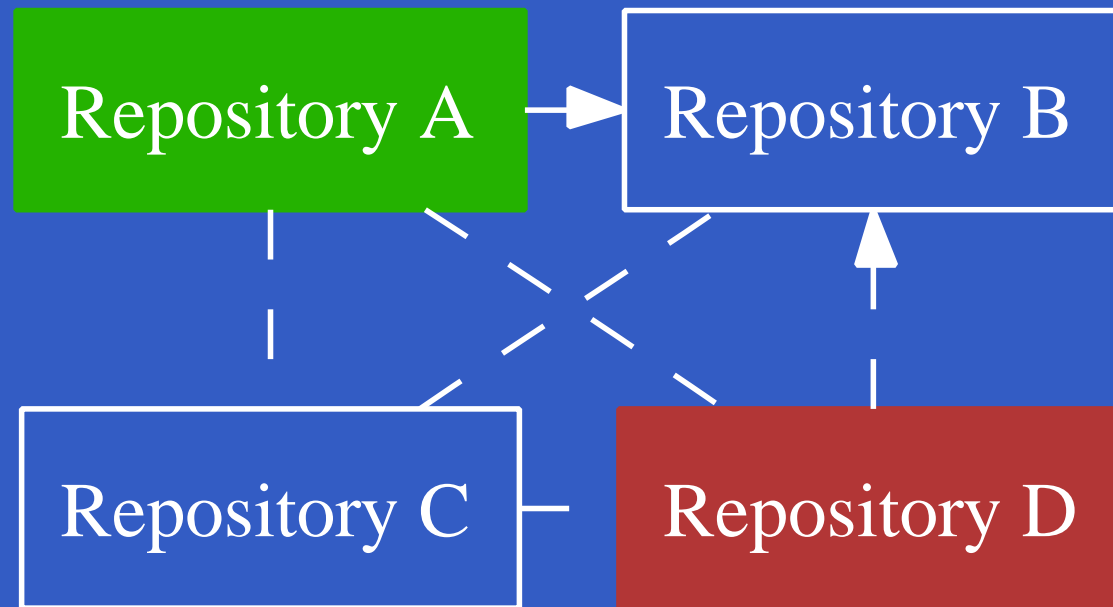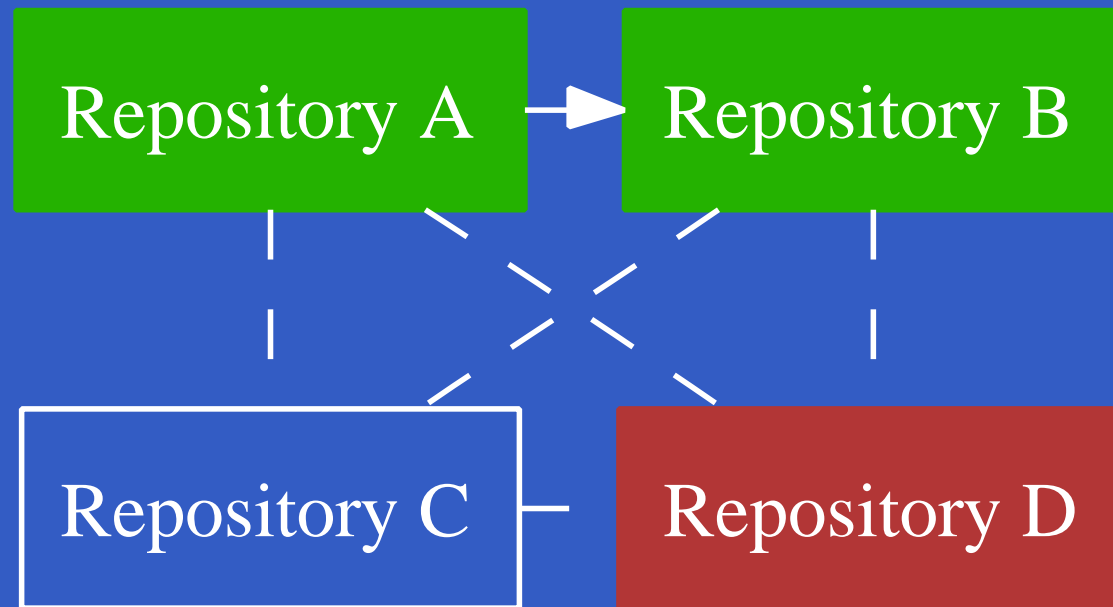
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Issues

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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?