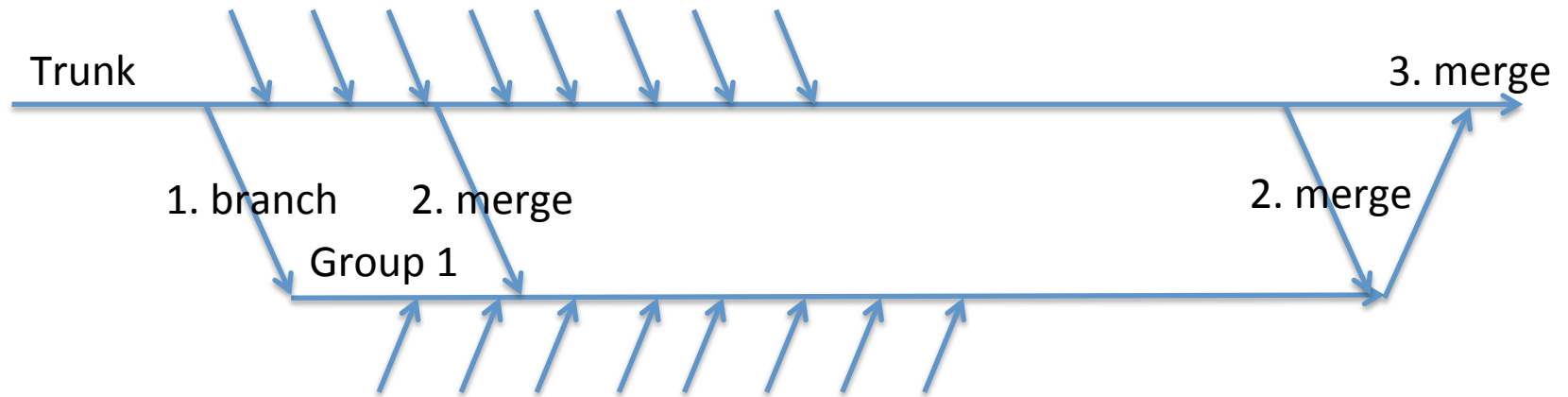# Project requirements

Well defined feature

- Clear descriptions
  - What?
  - What's still to do (concrete tasks)?
- Scoped
  - What will not be done?
  - How critical is it for the overall feature?
- Code merged with and tested in "trunk"

Running code

- http://apps.dhis2.org/mobile

- You have to
  - Merge you branch back to trunk
  - Tell me what test data/configuration you need that is missing (if any) from the demo DB.

Merging back to trunk

Distributed development = merging challenge

Trunk

1. branch 2. merge

Group 1

2. merge

3. merge

1. Branching

bzr co lp:trunk	Local co of trunk
bzr branch trunk groupX	Creating local branch
cd groupX;	
bzr push group1 lp:groupX	Group branch created
bzr bind lp:groupX	Convert to checkout
Make changes bzr up bzr ci …	Svn style…

2. Merging

`cd trunk` `bzr up`	Update local co of trunk

`cd ../groupX`
`bzr up`
`bzr st`
	Up-to-date?
	And no local changes?

`bzr merge ../trunk`	Merging!
`<fix conflicts>`	Expect conflicts
`bzr resolve`	Tell bzr (or get help)
`bzr ci`	Your branch is updated

3. Merging back

`cd groupX`	
`bzr up`	Up-to-date?
`bzr st`	And no local changes?
`cd trunk`	Update local co of trunk
`bzr up`	
`bzr merge ../groupX`	Merging!
`<fix conflicts>`	Expect conflicts
`bzr resolve`	Tell bzr (or get help)
`bzr ci`	Trunk is updated

Merging cont.

- Why checkouts?
  - One bzr push from the wrong place might be enough to loose trunk version history
  - Easier to understand?

- Commit to trunk between 2 & 3?
  - Not uptodate anymore
  - bzr up & ci as usual

Testing

- Junit, Spring test
- A little taste at unit and integration tests

… but much more to it

- Have any groups written any tests?
- Talked about it?
- What kind of tests?

Testing mobile browser features

- How does it look?
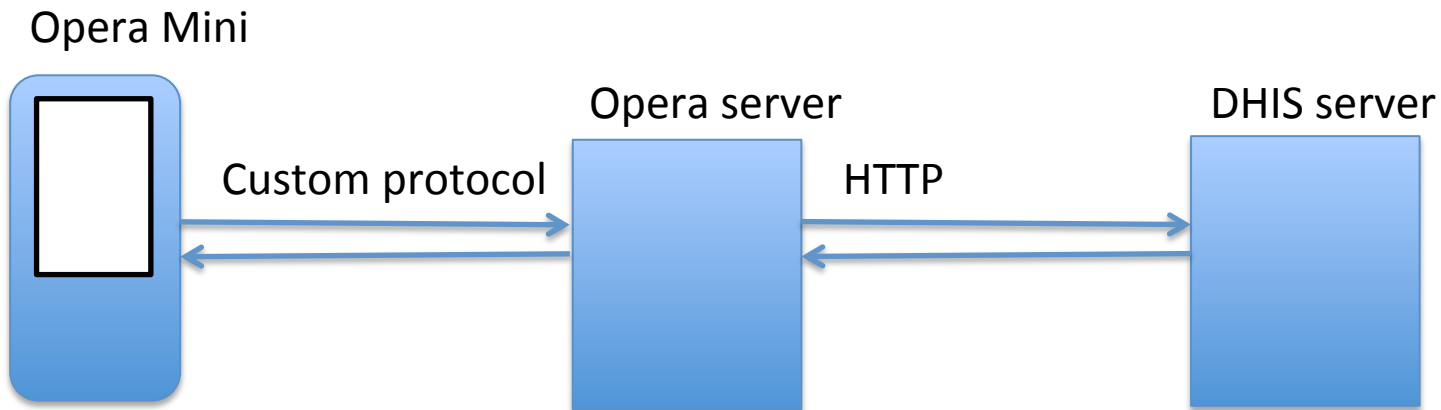- Does it work?

Need to test **on target platform(s)**

- Opera mini the main client
- Android

- Test your feature… but also what you might have broken (or others break in your code)

Opera mini in emulator

- Need an Java ME emulator
  - [Java ME SDK 3.0](#) (2.5.2 on linux)
  - [MicroEmulator](#)

- [Opera mini](#) 3,4,6

Testing mobile browser features

- Opera mini works through opera's server

=> localhost won't work

Opera Mini

Opera server

DHIS server

Custom protocol

HTTP

If you don't have a server

Any computer will do if it has:
- A public ip
- Firewall open on port 8080

- An amazon micro instance is free!

Or:
- Merge code into "trunk"
- Test on http://apps.dhis2.org/mobile

Merging to "Trunk"

- Test it out…
  - Created a separate "merge branch" for now
    - http://code.launcpad.net/dhis2-academy/…
    - Pushed to mobile instance by Jenkins
  - you can branch other groups and merge locally
  - Try merging with dhis trunk (lp:dhis2)
- I will update academy trunk next week
  - All groups must merge back into this trunk
  - If there are problems, we need to reso

Getting your code to trunk?

- Just repeat 2 & 3
- But beware of causing others trouble!

Quick recap

- Compile and run locally
- Watch what you commit
- Think through the implications of your code changes on others

Continous Integration

– Shorten the feedback loop

– Automate as much as possible

Jenkins

– http://apps.dhis2.org/ci/dhis-web-academy

– http://apps.dhis2.org/mobile/