Moderated collaboration among wireless users

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- groupware for shared modifications to create definitive version
- system performance depends on user availability
  - typical users are wireless
- analyzed wireless LAN users @ ND, IBM research, Île Sans Fil hotspot federation, SIGCOMM '01
  - sessions becoming smaller
- analyzed central: exclusive access & last writer wins, dist.: epidemics
  - poor performance when more users are active

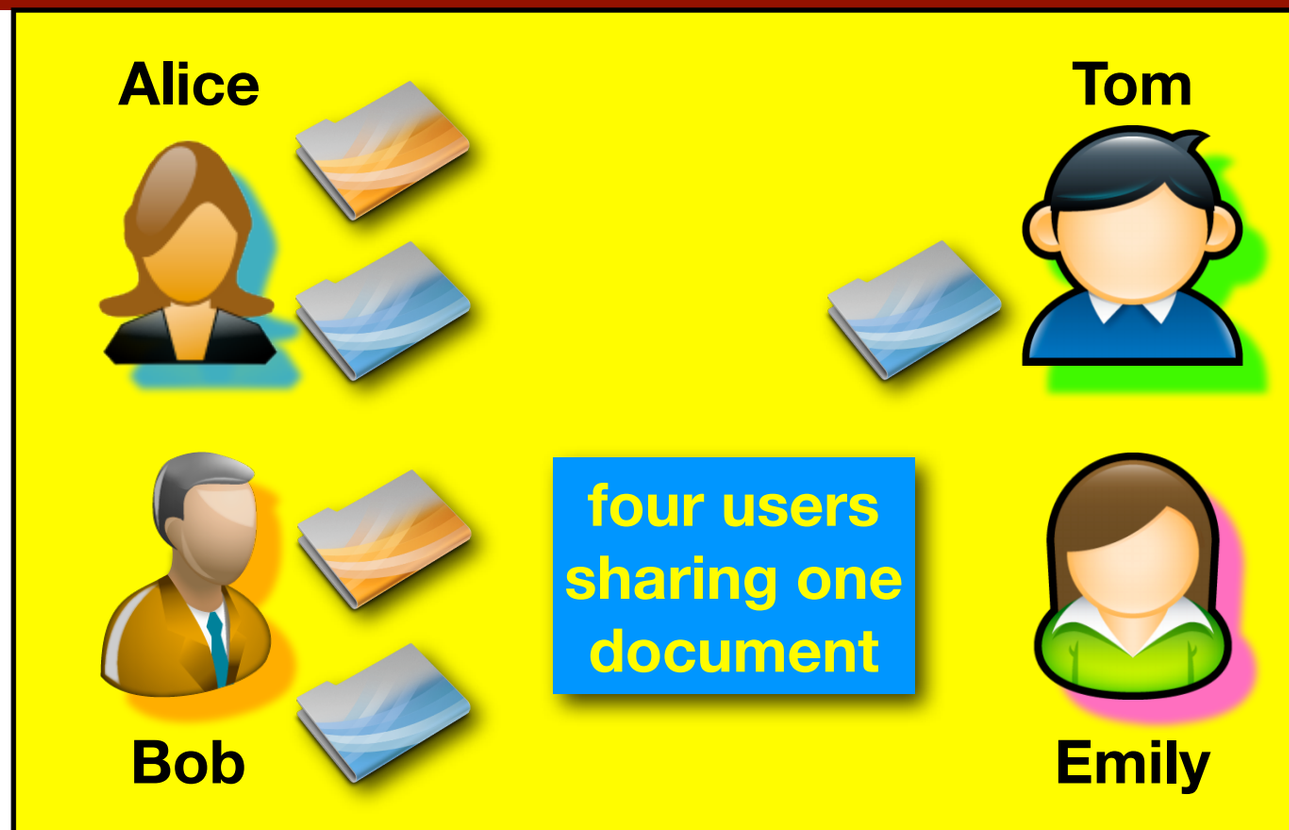
- Alice and Bob create report
- Tom and Emily create presentation
- Alice and Emily run exp. and create results used in presentation and report
- All read all documents while in progress

operating on a shared copy is not tenable for wireless users

Moderated collaboration among wireless users

- no single shared copy
  - each member exclusively maintains own updateable copy
  - users can hoard read-only copy of other's version
  - epidemic propagation of updates
- each member independently moderates (manual reconciliation) and incorporates changes from other's read only replicas
- eventual convergence
  - log, files opened during session
  - logs indicate convergence

Prototype using fuse + git exhibits adequate FS performance



- **Alice and Bob create report**
  - **Alice edits her copy, hoards Bob's**
  - **Bob edits his copy, hoards Alice's**
  - **Alice incorporates Bob's modifications on his copy into her copy and vice versa**
- **Emily/Tom could hoard any copy or create their own copy for modification**
  - **Tom hoards Alice's copy**