Creative Software Architectures for Collaborative Projects CS 130 Donald J. Patterson

GOAL: HAVE MULTIPLE EYES ON ALL CODE

- Identify obvious logic errors
- Make sure that the code meets the requirements of the branch
- Make sure new automated tests are sufficient for the new code
- Decide if existing automated tests need to be rewritten to account for changes in the code
- Verify that the new code conforms to existing style guidelines

BENEFITS

- Multiple developers know what is going on
- It helps everyone do a better job estimating code difficulty
- Allows developers to take time off (why?)
- Supports learning from each other
- Peer pressure prevents people taking shortcuts



COSTS

• Code reviews take time



CODE REVIEW TOOLS

Software +	Maintainer +	Development status +	License +	VCS supported +	Platforms supported +	Workflow +
Crucible	Atlassian	actively developed	Proprietary	CVS, Subversion, Git, Mercurial, Perforce	Java	pre- and post-commit
Gerrit	Shawn Pearce	actively developed	Apache v2	Git	Java EE	pre-commit
GitLab	GitLab Inc.	actively developed	MIT	Git	Ruby on Rails	pre- and post-commit
Kallithea	kallithea-scm.org	actively developed	GPL v3	Git, Mercurial	Python	post-commit
Patchwork	Stephen Finucane	actively developed	GPL v2	VCS-agnostic	Python	mailing list
Phabricator	Phacility	actively developed	Apache	Git, Subversion, Mercurial	PHP	pre- and post-commit
Review Board	reviewboard.org	actively developed	MIT	CVS, Subversion, Git, Mercurial, Bazaar, Perforce, ClearCase, Plastic SCM	Python	pre- and post-commit
Rietveld	Guido van Rossum	actively developed	Apache v2	Git, Subversion, Mercurial, Perforce, CVS	Python	pre-commit
RhodeCode	RhodeCode	actively developed	AGPL v3	Git, Subversion, Mercurial	Python	pre- and post-commit
Understand	SciTools	actively developed	Proprietary	Any	Windows, Mac OSX, Linux	pre- and post-commit
Upsource	JetBrains	actively developed	Proprietary	Git, Mercurial, Perforce, Subversion	Windows, Mac OSX, Linux	pre- and post-commit

CODE REVIEW TOOLS

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