gitter

Git repository feed reader for Android

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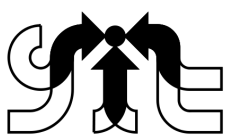
4/3/2012
Mobile Operating Systems and Applications



Outline

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git/gitweb

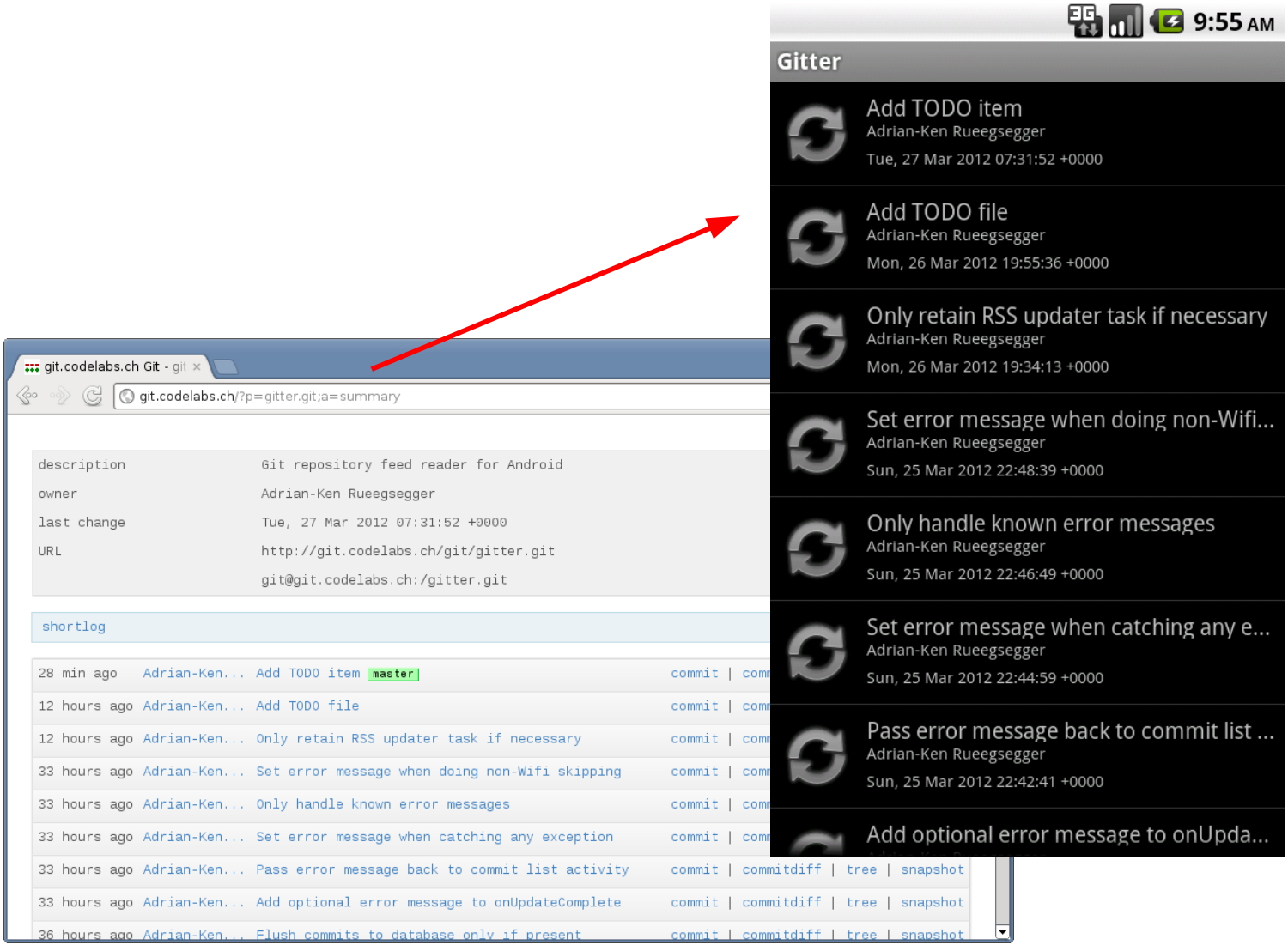
What is git?

- Git is a free & open source, distributed version control system
- Used by many open source projects
- Initially designed and developed by Linus Torvalds for Linux kernel development

What is gitweb?

- Web-based Git Repository Browsing (GitWeb)
- Reviewing recent changes in the repository
- Provides RSS feeds for projects / commits

Scratching The Itch



Motivation

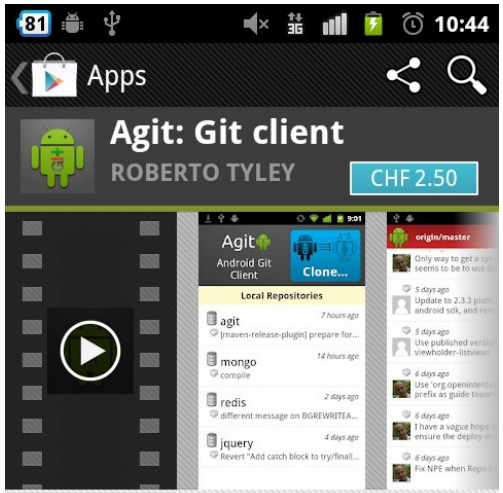
Why gitter?

- Know what is happening in your projects
- No existing application available
- We want to use it ourselves

Goals

- Get informed about new commits
- Inspect commit details / commit diffs
- Respond to commit author

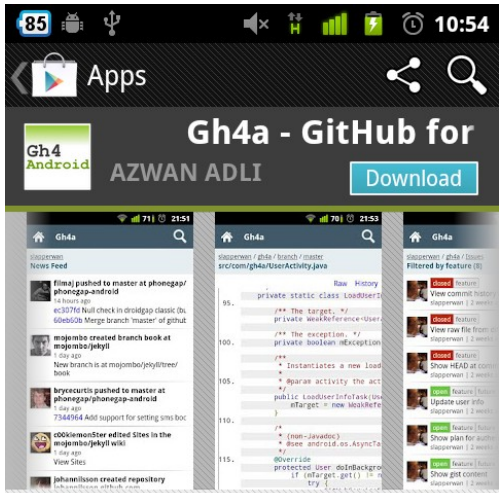
Related work



★★★★½ 50 March 5, 2012
1,000+ downloads 0.92MB

DESCRIPTION

Agit is a Git client for Android devices, allowing you to checkout the entire history of any Git repository (not just GitHub!) while on the move, review changes and store for full offline access.

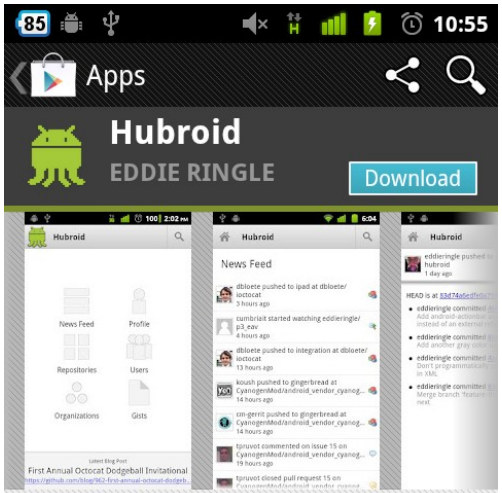


★★★★½ 173 October 10, 2011
10,000+ downloads 492KB

DESCRIPTION

This application provides access to github.com informations and stay connected with your networks.

FEATURES



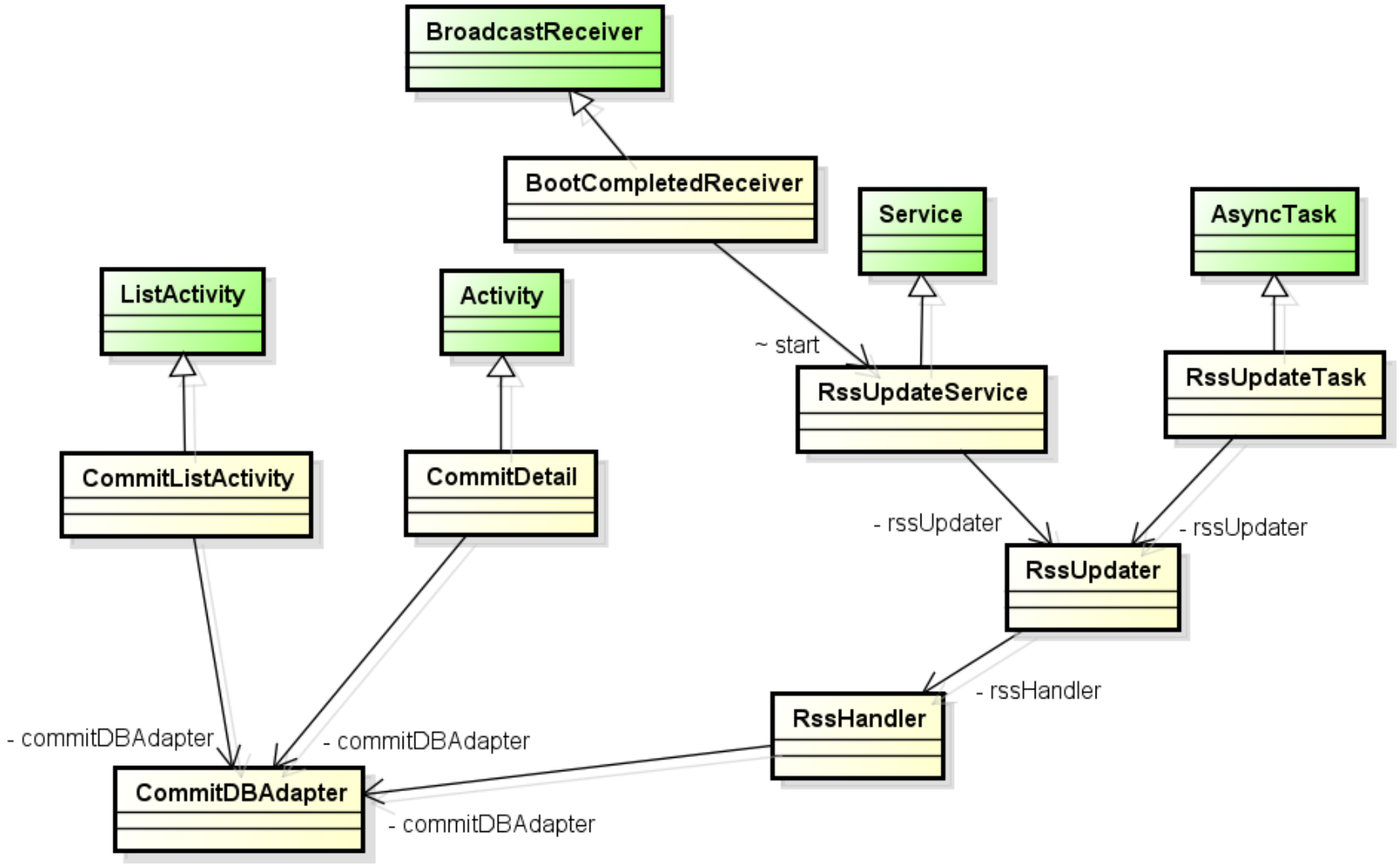
★★★★½ 130 October 10, 2011
5,000+ downloads 762KB

DESCRIPTION

The Original & Awesome GitHub Client for Android.

Access GitHub from your Android device! Hubroid was the first full-featured GitHub client available on Android. Access

Design


BroadcastReceiver
BootCompletedReceiver
Service
AsyncTask
ListActivity
Activity
~ start
RssUpdateService
RssUpdateTask
CommitListActivity
CommitDetail
- rssUpdater
- rssUpdater
RssUpdater
- rssHandler
RssHandler
- commitDBAdapter
- commitDBAdapter
CommitDBAdapter
- commitDBAdapter

Implementation

Details

- Commits are stored in SQLite database (`CommitDBAdapter`)
- RSS-feed parsing using SAX (`RssHandler`)
- Activities get commits directly from the DB
- Service fetches new commits in regular intervals (`RssUpdateService`)
- Service sends notifications using the NotificationManager

Selected code snippets

Code review

- Send notifications using `NotificationManager`
- Send an Email with (pre)filled content

Testing

gitter-test

- gitter Android test project
- Unit tests for core functionality
- Not everything is covered (yet)

Integration testing

- Eat your own dog food
- Use gitter to watch the gitter project repository
- Fix/change what we do not like

Summary of achievements

With gitter you can:

- Observe projects managed with git/gitweb
- Receive notifications on new commits
- Configure update behavior
- View detailed commit info
- Direct access to commit diff
- Send feedback to author

Lessons learnt

- Android is an interesting platform
- Eclipse integration is excellent
- Very easy to get started with mobile development
- Excellent tool support (e.g. device emulator, `adb`)
- Online resources are very helpful
- Choose your formatter settings at the beginning

Future work

TODO

- Improve test coverage
- Implement Pull-to-Refresh
- Filter unread commits / mark all commits as read
- More ways to interact with commit author (e.g. send SMS)
- Submit to market(s) (Google Play, F-Droid)