

Track Forever

Future-proofing issue trackers

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Motivation

- Issue tracking is essential to productivity
- Useful Features:
 - Offline access
 - Import/Export
 - Cross-platform
 - Collaboration (via central server)
 - Free
- No issue tracker supports all of these features

An issue tracker that combines these features would be for developers who are:

- Working while traveling
- Mining version control history
- Trying to fix older software
- Moving from one issue tracker to another

Motivation

	GitHub	JIRA	Redmine	TaskWarrior with BugWarrior
Offline Access?	✗	✗	✗	✓
Import function?	~	~	✗	✓
Export function?	~	~	~	✗
Cross-platform?	✓	✓	✓	✗
Supports collaboration?	✓	✓	✓	✗
Free?	✓	✗	✓	✓

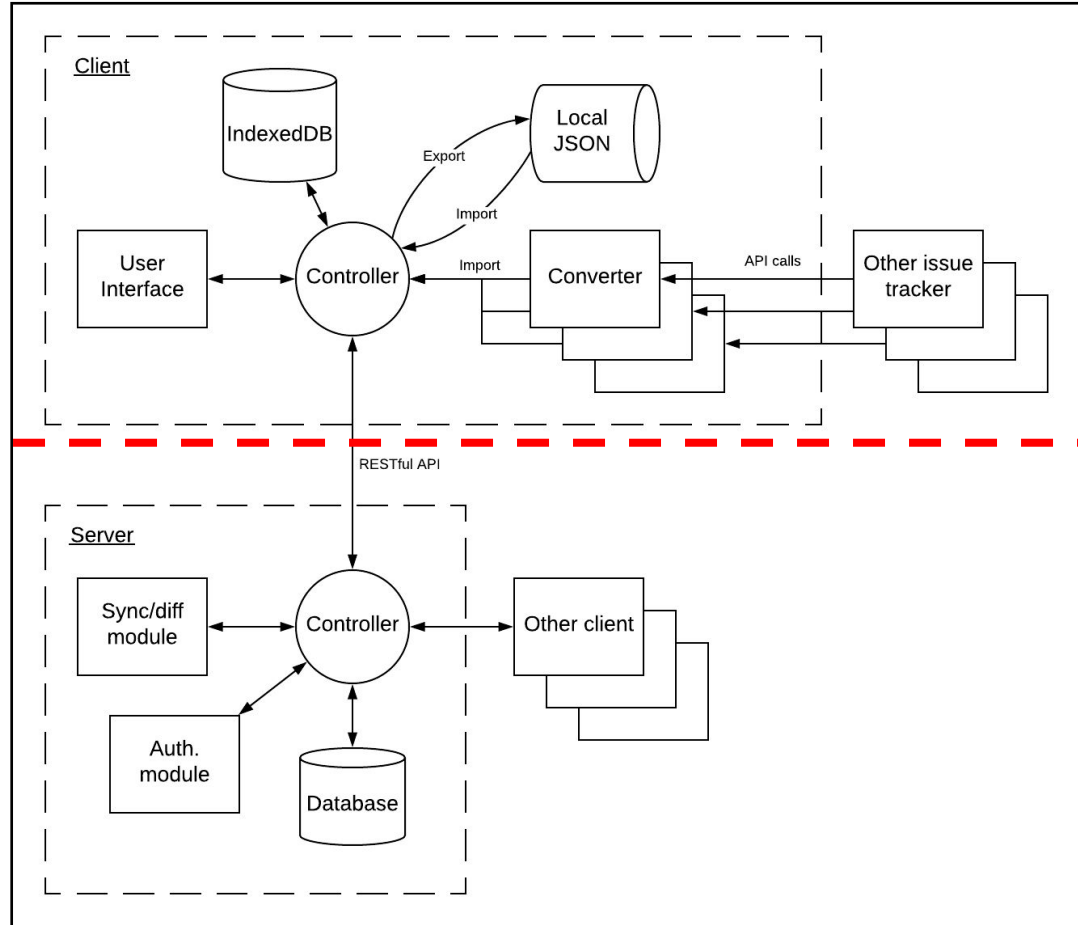
Related Work

- Offline support is an afterthought for most issue trackers
- TaskWarrior can import from 15 issue trackers and works offline
 - Lacks support for teams
 - No unified standard in their exports
- Jira can import from > 10 issue trackers and works offline
 - Proprietary → not future-proof
 - Not free
 - Exported issues are not designed to be universal
 - The offline access plugin has not been updated since it was revealed - on Windows XP

Approach

- Convert issue trackers into a unified format
- Prioritize extensibility to convert from more issue trackers
- Offline support

Everything below the red line is optional

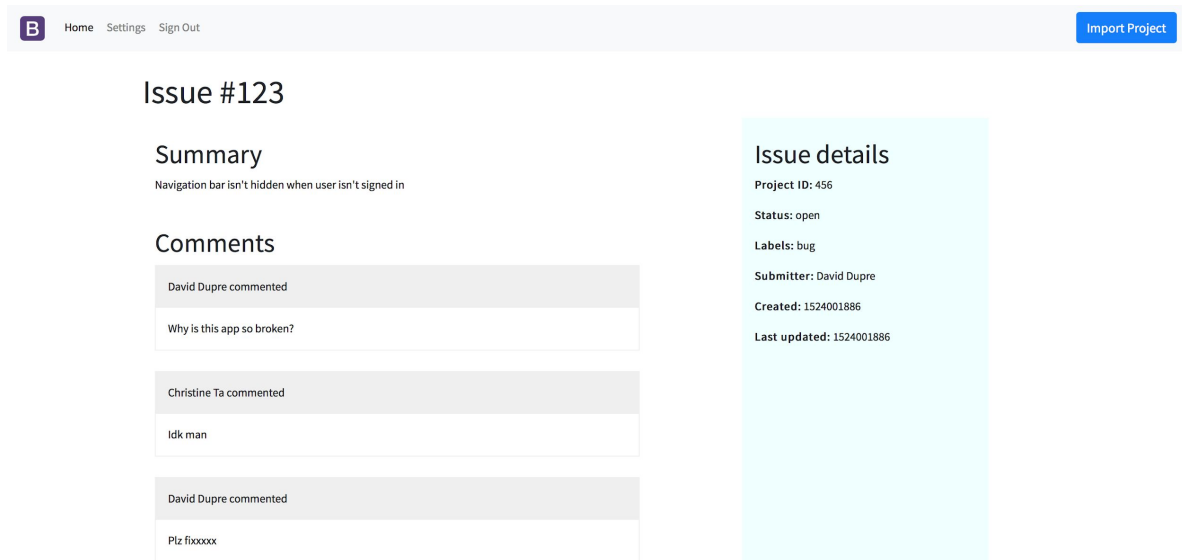


Web App

Features

- Import
- View
- Export

- Offline support
- User authentication
- Responsive design





[Home](#) [User Settings](#) [Sign Out](#)

[Import Project](#)

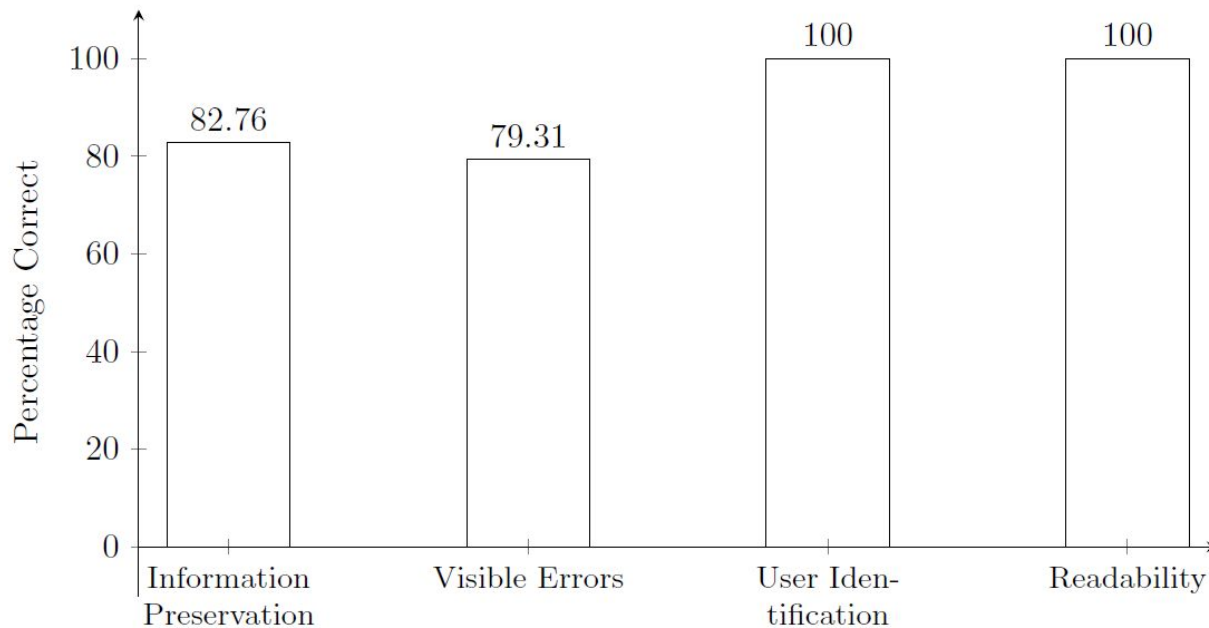
Metrics

- Primary metric: Number of issue trackers compatible with our tracker
- Conversion quality is **extremely** important
- Real world tests for each issue:
 - Preservation of important information (ID, status, etc)
 - Absence of visible errors (no text errors, no app rendering issues)
 - Retainment of user information
 - Successful retrieval from source (did it import at all?)

Preliminary Results (GitHub)

Total number of issues examined: 29

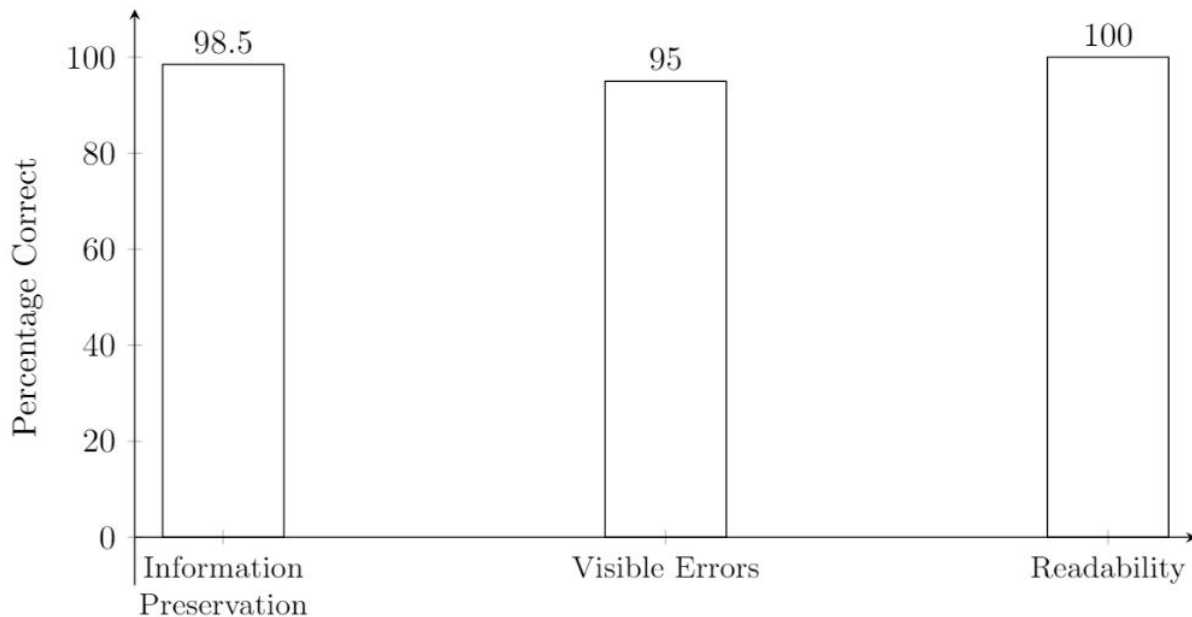
Final Score for issue tracker: 4.45 / 5.00



Preliminary Results (Google Code)

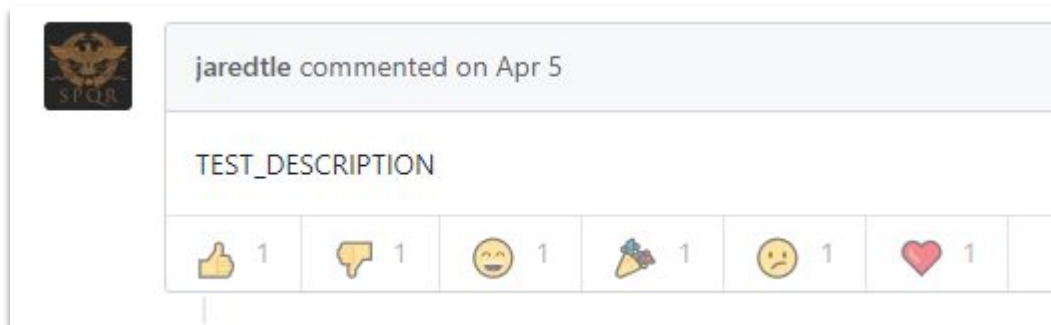
Total number of issues examined: 100

Final Score for issue tracker: 3.92 / 4.00



Difficulties and Challenges

- Rate limits (GitHub) on requests
- Importing issues
 - Symbols like asterisks and underscores sometimes appear incorrectly
- Different export file formats
- Conflicting fields
- Custom fields



Conclusion

- Issue tracking is a critical part to a team's productivity
- Maintaining those issues is important
 - Can be used as a reference for dealing with bugs previously encountered
- Track Forever maintains your project's issues and its progress overtime