Software Project Revival

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What this talk is about

Experiences from my current effort of reviving masqmail

What is masqmail?

A small Mail Transfer Agent (MTA)

Covers a niche:

- non-permanent online links
- multiple routes for sending and relaying

Especially suited for notebooks, workstations, and home servers

Free Software (GPL-2+)

Masqmail in numbers

10k lines of C code (uses glib)

Written between 1999 and 2002

1 main developer (Oliver Kurth)

5–10 people with larger contributions

53 releases (one every 3 weeks)

Start of my involvement

I used masqmail (since 2007)

It was orphaned (since 2006)

Wanted to take care (needs time)

Chance: Diploma Thesis

Do take such chances!

The diploma thesis

Diploma thesis

5 months

Covers: The current state of masqmail and what it takes to make it modern again

No code written

Just theoretical research (with the practice in mind)

Becoming the new maintainer

Who is the original author?

How to contact him? (Old email addresses)

Debian MIA

Telephone calls: don't forget time shifts

Telling the world

Announcement mail to 40 addresses I found related to masqmail (old mailing list, docs, debian/changelog)

Received reply from 10

Received valuable information from 5

2 subscribed to the new mailing list

Remember:

- Development stopped 6 years ago
- The project was orphaned 3 years ago

Acquiring knowledge

Reading docs (and mailing list archive, changelog, ...)

Books on related software (sendmail, postfix, exim, qmail)

Reading code! (10k SLOC)

Code reading

vim (#,gd,gf), grep, and call graphs

No ctags used, but would probably have been worthwhile

Emotions

Hype and depression

The wish to rewrite from scratch

The year afterwards

2009

Wanted to work on masqmail but couldn't get it on

“No time”

More interesting alternatives

Busy in studying

Retrospective: Needed some distance

Now

Individual project at university

Needed a practical project for my studies

Idea: Add the practical part to my diploma thesis

A new chance

Go for such chances!

(Important: A professor who supports you)

Forced me to work on masqmail

Code reading revisited

vi, grep

Documentation

Working in the code reveals deeper knowledge

Bug fixing

Started with fixing old bugs

Became more familiar with masqmail's internals

Discovered new bugs by fixing old bugs ;-)

Which bug reports are still relevant? Which are already fixed somewhere? Where?

Supplied additional information to bugs

Have a bug tracker (Debian's currently)

The community

Holds a lot of knowledge

Lost community $\rightarrow$ lost knowledge

- You need to learn everything from scratch on your own
- You cannot ask (!)

`http://web.archive.org` can be your friend

Good documentation

What is documented, where and how?

Praise the VCS log if you have one

Good commit messages (!)

Interesting ‘THOUGHTS’ file from very old version

Ask yourself: What information could someone need when he will look at that in a couple of years?

Releasing

Release! (early and often)

When exactly to release?

Quality of releases

Announcements to the mailing list and on `http://freshmeat.net`

Work steadily!

Be proud! (You have already achieved something)

Compatibility

Requires extra effort

Important for end-users

Cumbersome during active development

Coding style

Reformat the code or not? — It depends

But refactor (in the small) for clarity and simplicity

Remember: Everyone has his programming strength and weaknesses

It’s good when several people read and improve the code

Refactoring

Is risky without a good test suite

Especially risky (but also especially valuable) if someone doesn't know the code. (Different POV)

Refactor!

Adding features makes software larger,
fixing bugs makes software more correct,
but refactoring makes software better.

Tests

Are great to have

But who wants to write them?

Is the code testable?

(Anyone here who wants to add a test framework to masqmail?)

The team

Masqmail has no development team yet

Currently I feel the wish to discuss decisions with others

Although being the only one who decides can make things easier

Subscribe to the mailings list if you are interested

Masqmail's future

Todo

- End-user documentation (howtos, sample configs, articles in magazines)
- Add a test suite
- Refactor in the large (simplify)
- Encryption and authentication
- Add features

Masqmail wants you!

I welcome:

- users
- active people on the mailing list
- developers

Subscribe to the list and install masqmail. :-)

Final advice

Reviving orphaned software projects

Just do it!

It's a good way to start with project maintenance

It's a way on which everyone will benefit

Old software often has users, but it lacks developers

It's often easier than introducing new software

When developing software ...

Keep in mind:

- Release!
- Build up a community (work steadily)
- Document for the future (good commit messages)
- Refactor!
- Find someone who writes a test suite for you ;-)

References

References

Masqmail's homepage:
`http://marmaro.de/prog/masqmail`

To subscribe to the mailing list: Send a mail with the subject "subscribe masqmail" to `<minimalist@marmaro.de>`

My diploma thesis on masqmail:
`http://marmaro.de/docs/diploma/`

A ChaosSeminar about my diploma thesis:
`http://ulm.ccc.de/ChaosSeminar/2009/03_masqmail`

The quote was from: "Code Reading" by Diomidis Spinellis

Colophon

This talk was prepared using tools of the Heirloom project:
`http://heirloom.sf.net`

The slides macros are a (now much) modified version of
`http://repo.cat-v.org/troff-slider/`

The slides and their sources are available on my website
`http://marmaro.de/docs` and on
`http://ulm.ccc.de/ChaosSeminar/`

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