



Keeping up with Koha

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Where This Talk Began



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- ▶ They wanted to know how to upgrade, and how to stop this happening again.

Well, What's the Answer?

Upstreaming

What We're Going to Cover

Introduction

About Upstreaming

Problems With Not Upstreaming

Benefits of Upstreaming

When Not to Upstream

How To Upgrade

The Process of Upstreaming

How to Avoid Slipping Behind

What Is Upstreaming?



What Is Upstreaming?

- ▶ Upstreaming is the process of taking all your local customisations and sending them back to the project.
- ▶ It's pretty common in the Free Software world.

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...why doesn't everyone do it?

- ▶ People don't know how
 - ▶ ...come to the hackfest!

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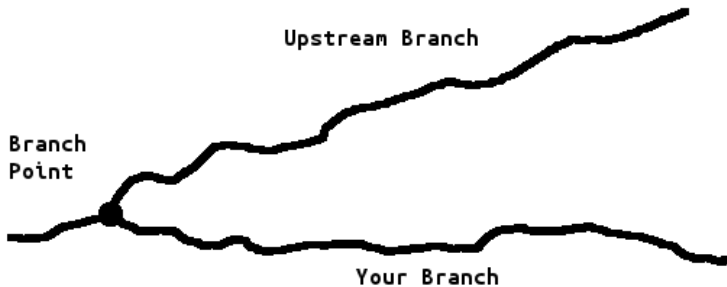
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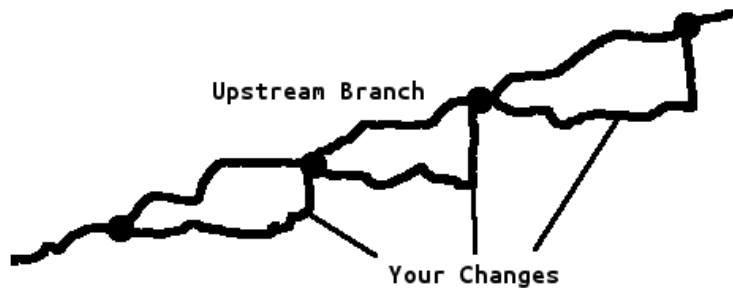
...why doesn't everyone do it?

- ▶ People don't know how
 - ▶ ...come to the hackfest!
- ▶ It takes time
 - ▶ ...it's true, it does.
- ▶ People (usually management) don't understand Free Software licensing
 - ▶ ...this doesn't seem to apply to libraries.

What Not Upstreaming Looks Like



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Problems With Not Upstreaming

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- ▶ Have to manually keep an eye on anything important, e.g. security patches

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The biggest cause of this is customisations.

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- ▶ Small releases every month
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- ▶ A lot can change in a very short space of time, making it harder to keep up.

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Makes Upgrading Easier

- ▶ Keeping up to date will be harder if you have your own changes.
- ▶ Upgrading with customisations causes:
 - ▶ Conflicts
 - ▶ A need to re-test
 - ▶ New features replacing your customisations

Benefits of Upstreaming

Everyone Gets to Use Your Features

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- ▶ Credit!
- ▶ They're supported by other people
 - ▶ No more maintenance!

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- ▶ Get to try/test features before they're released
- ▶ Get to meet cool people at conferences

When Not to Upstream

It's Not Always the Way

Sometimes you shouldn't upstream.

When Not to Upstream

Really Specific Customisations

For example:

- ▶ integrating with an intranet
- ▶ custom authentication systems
- ▶ things that might break the specifications

When Not to Upstream

Really Small Changes

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When Not to Upstream

Really Small Changes

- ▶ Upstreaming may be more trouble than it's worth
- ▶ Unless others might find it useful
 - ▶ More common than you might think
 - ▶ E.g. “fines” changing to “fines and charges”

When Not to Upstream

Sometimes It May Be Worth Upstreaming Anyway...

- ▶ Features can often be generalised to work for other people
- ▶ Make a syspref or two that allow it to be configured

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- ▶ Watch for big upcoming changes
 - ▶ Like the switch to Template::Toolkit
- ▶ The change between releases (e.g. 3.6 to 3.8) will always be hard

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There are really two options:

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- ▶ Support companies can help with this.

How To Upgrade

Throw it all away, start again

- ▶ But keep the data!
 - ▶ This is quite easy if you're on a version 3 series already.
 - ▶ Harder from 2 and lower.
 - ▶ Too many people are stuck on 2.2.

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 - ▶ This is quite easy if you're on a version 3 series already.
 - ▶ Harder from 2 and lower.
 - ▶ Too many people are stuck on 2.2.
- ▶ Likely to be the best method for large changes
 - ▶ Now you can reimplement the changes you need, and upstream them!

The Process of Upstreaming

Different Approaches

- ▶ Do everything in-house, throw it over the wall when finished.
 - ▶ Often the approach taken by companies who don't "get" Free Software.

The Process of Upstreaming

Different Approaches

- ▶ Work with the community every step of the way, uploading every change.
 - ▶ This is the ideal.
 - ▶ Not always practical.

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- ▶ For things in the middle, find people who will help and give you feedback.

The Process of Upstreaming

Regarding Git

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No really. Always use Git.

The Process of Upstreaming

Prepare the Patch

- ▶ Create a ticket at the Koha bugtracker.

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- ▶ Follow the coding guidelines.

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“Do NOT fall into the trap of adding more and more stuff to an out-of-tree project. It just makes it harder and harder to get it merged. There are many examples of this.”

— Andrew Morton (Linux Kernel Developer)

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- ▶ Make sure it updates the database schema, and `updatedatabase.pl`.

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- ▶ Revise it in response to comments.
- ▶ Be prepared to throw it away if something similar or better comes along.
- ▶ For medium-sized changes, be prepared for a 20% or 30% overhead when upstreaming.
 - ▶ Unless it takes ages to get in, then it might need a lot of refactoring.

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- ▶ Release early, release often.
- ▶ Work in self-contained units (where possible.)
- ▶ Get feedback from other developers.
- ▶ Try to find others to help.
- ▶ Try to get other libraries involved.
 - ▶ Pooling resources is a big strength of Free Software.

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 - ▶ Perhaps run a testing system with master so you can see what's happening there.
- ▶ Maintain your features
 - ▶ You'll have to keep them up to date until they get into a stable branch.
- ▶ Keep your production versions fairly up to date.

In Conclusion

- ▶ Get up to date.
- ▶ Stay there.
- ▶ Work with the community.
- ▶ Accept that it'll seem like more work, but probably won't really be.