

Ubuntu  
Development  
Processes

Mackenzie  
Morgan

Developer  
Groups

The Release  
Cycle

Making  
Changes

Bugs

# Ubuntu Development Processes

Mackenzie Morgan

CALUG

12 May 2010

# Outline

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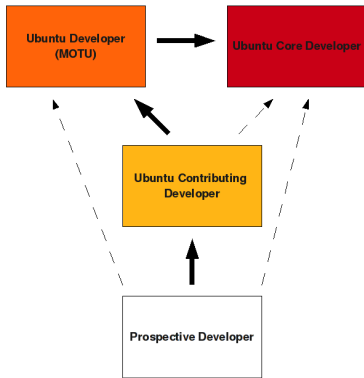
1 Developer Groups

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3 Making Changes

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# Who are the developers?



But that's outdated

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# What changed?

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Archive reorganisation (hereafter: archive reorg)

# What's archive reorg?

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A switch away from components to a unified archive with finer-grained RBAC for uploading

# Pre-Archive Reorganisation

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4 components:

- Main
- Restricted
- Universe
- Multiverse

Core-devs upload to all of the above.

Masters of the Universe (MOTU) upload to Universe & Multiverse

# Post-Archive Reorganisation

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## Packagesets:

- Ubuntu Desktop
- Ubuntu Server
- Kubuntu
- Xubuntu
- Mythbuntu
- Ubuntu Studio
- Ubuntu Education Edition
- Ubuntu Mobile
- Kernel

Correspond to packages on install discs

# And those access controls...?

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- Each packageset has a set of developers
- Core devs still upload anything
- MOTU upload anything not in a package set
- New: Generalist devs upload anything not in a *restricted* packageset
- New: Per-package uploaders



# Where are we now?

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Done:

- Ubuntu Desktop
- Ubuntu Server
- Kubuntu
- Mythbuntu
- Kernel
- Per-package uploaders

# How many developers are there?

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- 147 in ubuntu-dev
- Unknown number of “prospective developers”

# How do I find a package's maintainer?

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You don't. We're not Debian.

# What if you lack upload rights?

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Other developers can sign off on and upload your package  
(sponsoring)

# How do you get upload rights?

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- 1 Do good work & get it sponsored
- 2 Create a wiki page to apply
- 3 Get sponsors to vouch for you on your wiki page
- 4 Go to a Developer Membership Board (or one of the delegated boards) meeting and get voted in

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# First things first

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- Binary-copy packages from previous release
- Automatically sync from Debian Sid
- Merge remaining packages

# Stages

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- Ubuntu Developer Summit
- 4 Alphas
- 1 Beta
- 2 Release Candidates
- Ship it!

Also, *lots* of freezes (Toolchain, Debian Import, String, UI, Feature. . .)



# What happens during freezes?

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Uploads are queued pending Archive Admin approval  
<http://launchpad.net/ubuntu/maverick/+queue>

# Stable Release Upgrades (SRU)

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Bugs

- Bugfixes only (preferably minimal patch)
- Must document regression potential
- Package is uploaded to -proposed for 2 weeks

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# Packages are kept in VCS, like every other distro, right?

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Er... yes and no...

**Yes**, all but ~500 packages are in bzr now

**No**, it hasn't always been this way

**Ubuntu Distributed Development (UDD)** is the attempt at change

# Why?

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We followed Debian on the `debuild -S && dput`  
`../*.changes` thing

# Why change?

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Debian has only a few maintainers per package  
We have team maintainership, >70 developers responsible

# How's the change going?

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Slowly.

# Why slowly?

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We have (thanks mostly to James Westby):

- tools (mostly)
- docs (mostly)
- branches (mostly)

Have you ever tried to convince 150 people to stop doing what seems to work and learn something new?



# Old workflow

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Bugs

- `apt-get source foo`
- `cd foo`
- Make changes & add changelog entry
- `debuild -S`
- Use pbuilder to test-build `../*.dsc`
- `dput foo*.changes`

# New workflow

(See if I get this right)

- `bzr branch lp:ubuntu/foo` or `bzr branch lp:ubuntu/hardy/foo`
- `cd foo`
- Make changes & add changelog entry
- `bzr-buildpackage -S`
- Use pbuilder to test-build `../*.dsc`
- `debcommit`

Then it diverges...

If the team merges many changes then releases: `bzr push`

If not: `dput ubuntu ../*.changes && bzr mark-uploaded && bzr push`

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# How are patches handled in Ubuntu?

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Badly.

# Why?

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“Not enough monkeys”

– Daniel T. Chen

~2000 patches bitrotting in Launchpad

# What's being done about it?

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Ubuntu Reviews team formed to:

- review patches
- upstream patches if needed
- run Patch Days

# How can I submit a patch?

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Bugs

- Attach it to the bug report
- Mark it as a patch on upload
- Add the “patch” tag to the bug

# Can I use the bzd branches from before?

Yes!

If making a new candidate revision:

- In debian/changelog: LP: #12345
- `debcommit`
- `bzd push lp:me/foo/fixfor12345`

If not:

- `bzd commit --fixes 12345`
- `bzd push lp:me/foo/fixfor12345`

Branch is automatically linked to bug report  
`bzd lp-open` to submit merge proposal



# Can I submit a debdiff like in Debian?

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Yes!

Subscribe ubuntu-sponsors to the bug report (and still include LP: #12345 in debian/changelog)

# What's that LP: #12345 stuff?

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Bug #12345 will be automatically marked Fix Released when the package is uploaded

# Why so many bugs in stable?

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Bugs

- Testing happens too late (Beta)
- Rushing to fix bugs late introduces *more* bugs
- Need more developers

# Questions?

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**Bugs**