Debian Pure Blends

How to work with the Blends framework

Andreas Tille

MiniDebConf Berlin 2010

Berlin, June 10, 2010

Overview

1. How to start a Blend
    - Subsetting Debian
    - Forming a team
2. Used techniques
    - Metapackages
    - Web sentinel
3. Future

Why creating a Debian Pure Blend

- Focussing users to subset of packages
- Adapting system and user interface to specific needs (working environment, user language, etc.)
- While Debian stays general support specialists as well
- **No derivative** from Debian

Basic idea: Do not make a separate distribution but make Debian fit for special purpose instead

Attracting people to use Blends

Users

- I18n-ed web pages displaying relevant packages
- Promoting software that builds a complete working environment
- Rise user interest by providing ready to install software in the context of their work field

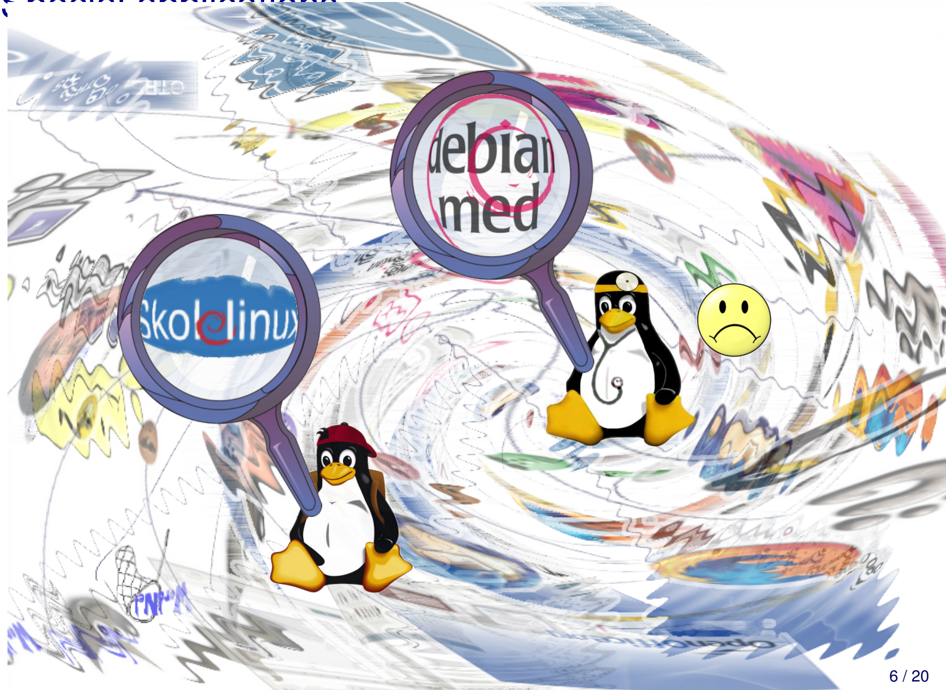
Developers

- Simple way to categorise packages (“tasks files”)
- Key documentation feature
- QA pages (Bugs of relevant packages)
- Acceptance of new methods higher if the techniques provided are convincing enough

A Blend is more than just technique

- Choose an interesting topic for a large user group
- Try to get people involved
  - developers
  - users
- Invite maintainers of applications fitting the scope of the Blend
- Involve upstream maintainers and active users of interesting applications
  (and possibly turn them into DDs)
- Example: Debian has now at least five more developers because they joined via Debian Med involvement

Special applications



Building metapackages using *blends-dev*

- Define set of dependency relations in *tasks* files
- *blends-dev* does the following automatically:
  - Verify availability of `Depends` / `Recommends`
  - Packages unavailable in `main` will be turned into `Suggests`
  - Create proper *debian/control* file to build valid metapackages
  - Create *tasksel* control file *<BLEND>-tasks.desc*

Using *blends-dev*

debian/rules

```
#!/usr/bin/make -f
include /usr/share/blends-dev/rules
```

debian/control.stub

- *debian/control* will be autogenerated
- Only information for source package is in stub
- See *"/usr/share/doc/blends-dev/examples/debian"*

*tasks/**

See *"/usr/share/doc/blends-dev/examples/tasks"* or other Blends for working examples

Tasks files

Similar to *debian/control*

```
Task: taskname
Description: Shortdescription
 Longdescription

Depends: some dependant packages
Recommends: some recommended packages
Suggests: some suggested packages
```

Web sentinel

- Currently tasks and bugs pages
- Providing information about packages of interest
- Created by reading tasks files from Blends SVN containing
  - Dependency relations of packages inside Debian
  - Preliminary package information / WNPP
- Gathering all available information about the package dependencies defined in the tasks file from
  - Ultimate Debian Database (UDD): (translated) descriptions, versions and architectures, screenshot URLs, bugs, etc.
  - Additional information in tasks file itself

Intention of tasks pages

- Key entry point for users
- Quick overview about what's inside Debian regarding their specific work field
- Turned out to be QA tool for developers as well
- Meta information like
  - Homepage
  - Maintainer and VCS of Debian packaging
  - Screenshot (`http://screenshots.debian.net`)
  - DEHS, versions and architectures
  - DebTags
  - Popcon
  - even scientific quotation if available

➜ Demo `http://blends.alioth.debian.org`

Additional fields in tasks files

Prospective packages

Depends: *not yet existing package name*

Homepage: *Homepage of project*

Responsible: *Future maintainer (optional)*

License: *License of software to package*

WNPP: *Bug number (optional)*

Vcs-*vcstype* : *Vcs URI (optional)*

Vcs-Browser: *Vcs URL (optional)*

Pkg-URL: *URL to unofficial package*

Pkg-Description: *Description of prospective package*

Configuration of web sentinel

svn://svn.debian.org/blends/blends/trunk/webtools/webconf/

```
Blend:       debian-med
ProjectName: Debian Med
ProjectUrl:  http://debian-med.alioth.debian...
Homepage:    http://www.debian.org/devel/deb...
AliothUrl:   http://alioth.debian.org/projec...
ProjectList: debian-med@lists.debian.org
LogoUrl:     http://debian-med.alioth.debian...
OutputDir:   /var/lib/gforge/chroot/home/gro...
DataDir:     /var/lib/gforge/chroot/home/gro...
VcsDir:      /svn/blends/projects/med/trunk/...
CSS:         ../inc/style.css
Advertising: _('Help us to see Debian used by...
PkgList:     debian-med-packaging@lists.alio...
```

Weighting bugs

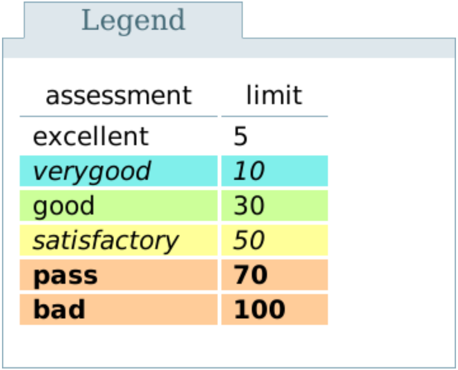
- Try to find a measure for bugs of dependant packages
- Currently not normalised to the number of dependencies but rather regarding absolute number of bugs
- Weighting numbers for the different severities ranging from 10 for the RC bugs until 0 for wishlist bugs

Example calculation

```
1 serious bug in dependent pkg:    1⋆10⋆3 = 30
2 important bugs in dependent pkg: 2⋆ 5⋆3 = 30
1 important bug in suggested pkg:  1⋆ 5⋆1 =  5
1 normal bug in dependent pkg:     1⋆ 3⋆3 =  9
1 minor bug in dependent pkg:      1⋆ 1⋆3 =  3

weighted sum =                              77
```

Colouring according bugs weight



Legend

assessment	limit
excellent	5
verygood	*10*
good	30
satisfactory	*50*
pass	**70**
bad	**100**

- Metapackage can not be in status "good" if there is at least serious (or higher) bug in a dependant package
- Not "very good" if there is a RC bug in a suggested package
- Two RC bugs in suggested packages might qualify for "good" - if there are only a very view other bugs

Planned features for web sentinel

- More QA overviews
  - Lintian report overview
  - Adding Ubuntu bugs
- I18n information of applications
- Upstream metadata like
  - Please cite
  - Link to donation page

Make `blends-dev` use UDD

- Build metapackages based on UDD information
- Thus enabling `architecture=any` metapackages
- Include tasks file information into UDD

Try to establish technique

- Further enhancements
- Rewrite *blends-dev* to use UDD
- Make even more projects like DebiChem and Debian-GIS actively using the framework
- Try to bring back external projects to Debian by providing attractive tools

This talk can be found at
http://people.debian.org/˜tille/talks/
Andreas Tille <tille@debian.org>