
10 years of T_EX Live in Debian

Norbert Preining

Abstract

T_EX Live has turned into the most widely used T_EX distribution since support ended for teT_EX. Debian has carried a packaged version of T_EX Live for 10 years now. We review the history of T_EX packages in Debian, and in particular the history of T_EX Live packaging.

1 Introduction

Getting older, people usually start looking back at things that happened in the past, and I am no different. So I recently realized that this year (2016) there are several *anniversaries* of my involvement in the T_EX world: 14 years ago I started building binaries for T_EX Live, 11 years ago I proposed packaging T_EX Live for Debian, 10 years ago the T_EX Live packages entered Debian. There are other things to celebrate next year (2017), namely the 10 year anniversary of the (no longer new) infrastructure (esp. `tlmgr`) of T_EX Live packaging, but this will come later. In this article I want to concentrate on my involvement with T_EX Live in Debian.

2 Debian releases and T_EX systems

The T_EX system of choice in Debian was for many years teT_EX [8], curated by Thomas Esser. Digging through the Debian archive and combining this with ChangeLog entries as well as personal experiences since I joined Debian, the timeline of T_EX in Debian to the best of my knowledge can be found in Table 1.

The history of T_EX in Debian is thus split more or less into 10 years of teT_EX, and 10 years of T_EX Live. While I cannot check back to the ultimate origin, my guess is that already in the very first Debian releases (te)T_EX was included. The first release I can confirm (via the Debian archive) shipping teT_EX is the release Bo (June 1997). Maintainership during the first 10 years showed some fluctuation: The first years/releases, till about 2002, were dominated by Christoph Martin with Adrian Bunk and few others, who did most of the packaging work on teT_EX version 1. After this Atsuhito Kohda with help from Hilmar Preusse and others brought teT_EX up to version 2, and from 2004 to 2007 Frank Küster, again with the help of Hilmar Preusse and others, took over most of the work on teT_EX. Other names commonly appearing throughout the ChangeLog are Julian Gilbey, Ralf Stubner, LaMont Jones, and C.M. Connelly — and there were many more bug reporters and fixers.

Looking at table I have to mention the incredible amount of work that both Atsuhito Kohda and Frank Küster have put into the teT_EX packages, and many of their contributions have been carried over into the T_EX Live packages. While there weren't many releases during their maintainership, their work has inspired and supported the packaging of T_EX Live to a huge extent.

3 Start of T_EX Live

I got involved in T_EX Live back in 2002 when I started building binaries for the alpha-linux architecture. I can't remember when I first had the idea to package T_EX Live for Debian, but here is a timeline from my first email to the Debian Developers mailing list concerning T_EX Live to the first accepted upload:

2005-01-11: *binaries for different architectures in debian packages [1]*

This is my first email to the Debian community about packaging T_EX Live. It is easy to see that I didn't have much of a clue about Debian packaging at that time, as I proposed to simply reuse the binaries that are included in T_EX Live, instead of properly building them for Debian.

2005-01-25: *Debian-TeXlive Proposal II [2]*

After the initial round of feedback (and flames) I proposed a new layout with adaptations, but still continued to try to avoid rebuilding the binaries.

2005-05-17: *Proposal for a tex-base package [3]*

As we were planning to have two distinct (and overlapping) T_EX systems in Debian, together with Frank Küster we proposed a package `tex-base`, later to be named `tex-common`, as basis for both the teT_EX and T_EX Live packages, providing common basic infrastructure.

2015-06-10: *Bug#312897: ITP: texlive [4]*

The first *official* step in packaging a new 'program' for Debian is the ITP bug — *Intend to package*.

2005-09-17: *Re: Take over of texinfo/info packages [5]*

In the course of preparing T_EX Live package I needed to put my hands on several other T_EX-related packages, the first being `texinfo`, which was orphaned (without a Debian maintainer) at that time. It was also based on this package that I became a Debian Developer.

2005-11-28: *Re: texlive-basic_2005-1_i386.changes REJECTED [6]*

When a new package is the first time uploaded to Debian, it cannot enter immediately but has to go through a severe scrutiny by the so-called 'ftp-masters'. They check for license compliance, Debian

Date	Version	Name	teTeX/TeX Live	Maintainers
1993–96	<1	?	?	Christoph Martin
6/1996	1.1	Buzz	?	
12/1996	1.2	Rec	?	
6/1997	1.3	Bo	teTeX 0.4	
7/1998	2.0	Ham	teTeX 0.9	
3/1999	2.1	Slink	teTeX 0.9.9N	
8/2000	2.2	Potato	teTeX 1.0	
7/2002	3.0	Woody	teTeX 1.0	
6/2005	3.1	Sarge	teTeX 2.0	Atsuhito Kohda
4/2007	4.0	Etch	teTeX 3.0, TeX Live 2005	Frank Küster NP
2/2009	5.0	Lenny	TeX Live 2007	NP
2/2011	6.0	Squeeze	TeX Live 2009	
5/2013	7.0	Wheezy	TeX Live 2012	
4/2015	8.0	Jessie	TeX Live 2014	
?	?	Stretch	TeX Live \geq 2015	

Table 1: History of TeX systems in Debian

policy compliance, and some say their daily level of comfort, before allowing a new package to enter Debian. After my first upload I got extremely negative feedback, including statements like ‘Why do we need another TeX system.’ Together with Frank Küster we drafted a response, which sparked a long discussion about packaging and helped improve the naming of packages (but not especially the packaging itself).

2006-01-12: *Upload of TeX Live 2005-1 to Debian*

The first upload that successfully passed the scrutiny of the ftp-masters.

2006-01-22: *Accepted texlive-base 2005-1 (source all) [7]*

TeX Live packages accepted to Debian/experimental.

One can see from the first emails that at that time I had no idea of correct Debian packaging and proposed to ship the binaries built within the TeX Live system on Debian. What followed was first a long discussion about whether there is any need for “just another” TeX system. The then maintainer Frank Küster took a clear stance in favor of including TeX Live, and after several rounds of proposals, tests, rejections and improvements, the first successful upload of TeX Live packages to Debian/experimental happened on 12 January 2006, so exactly 10 years ago.

4 Packaging

From the beginning, Debian has used a meta-packaging approach. That is, instead of working directly with the TeX Live sources, (Perl) scripts generate

Debian source packages from a set of directives. We introduced this extra layer for several reasons:

- The original format of the TeX Live packaging information (`tpm`) was XML files that Debian parsed with an XML parser (`libxml`). I surmise (from what I have seen over the years) that only the Debian packages did proper parsing of these `.tpm` files for packaging.
- TeX Live packages were often reshuffled, and Debian package names changed, which would have otherwise caused a certain level of pain during the creation of original tar files and packaging.
- General flexibility in creating additional packages and arbitrary dependencies.

Although I have never been 100% sure that it was the best idea, the scripts nevertheless remain in place to the present day, only adapted to the new packaging paradigm in TeX Live (without XML) and adding new functionality. This allows me to just kick off one script that does all the work, including building `.orig.tar.gz`, source packages, and binary packages.

For those interested in following the frantic activity during the first few years, there is a file `CHANGES.packaging` [9] which extensively documents the changes made for the years from 2005 to 2011. I don’t want to count the hours that went into this.

5 Development over the years

TeX Live 2005 was just another TeX system but not the preferred one in Debian Etch and earlier. But

in May 2006, Thomas Esser announced the end of development for teTeX , which cleared the path for TeX Live as the main TeX system in Debian (and the world!). The next release of Debian, Lenny (1/2009), already carried only TeX Live . Unfortunately it was only TeX Live 2007 and not 2008, mostly due to my having been involved in rewriting the upstream infrastructure based on plain text package descriptions instead of the notorious XML files. This took quite a lot of attention and time from Debian away to upstream development, but this will be discussed in a different post.

Similarly, the release of TeX Live included in Debian Squeeze (released 2/2011) was only TeX Live 2009 (instead of 2010), but in the releases since then (Wheezy and Jessie), the versions of TeX Live in Debian have been the latest releases.

6 Current status

Since about 2013 I am trying to keep a regular schedule of new TeX Live packages every month. These helps me to keep up with the changes in upstream packaging and reduces the load of packaging a new release of TeX Live . It also brings to users of unstable and testing a very up-to-date TeX system, where packages at most lag one month behind the TeX Live network updates.

7 Future

As most of the readers here know, besides caring for TeX (Live) and related packages in Debian, I am also responsible for the TeX Live Manager (`tlmgr`) and most of upstream's infrastructure including network distribution. Thus, my (spare, outside work) time needs to be distributed between all these projects (among others) which leaves less and less time for Debian packaging. Fortunately the packaging is in a state that makes regular updates once a month a light enough burden to accomplish, since most steps are automated. What remains a bit of a struggle is adapting the binary package (`src:texlive-bin` [10]) to new releases. But also this has become simpler due to less invasive changes over the years.

All in all, I don't have many plans for TeX Live in Debian besides keeping the current system running as it is. And this is in itself already a good reason to search for new contributors and maintainers!

8 Search for and advice to future maintainers and collaborators

I would be more than happy if new collaborators appear, with fresh ideas and some spare time. Unfortunately, my experience over these 10 years with

people showing up and proposing changes (anyone remember the fellow proposing a complete rewrite in ML?) has been that nobody wants to invest serious time and energy, but merely searches for quick solutions. This is not something that will work with a package like TeX Live , with a size of several gigabytes (the biggest in the Debian archive), and complicated inner workings.

I advise everyone interested in helping to package TeX Live for Debian (or for that matter any other operating system distribution), to first install normal TeX Live from TUG, get used to what actions happen during updates (format rebuilds, hyphenation patterns, map file updates). One does not need to have a perfect understanding of what exactly happens down there in the guts (I didn't have in the beginning, either), but if you want to help with packaging but have never heard of format dumps or map files, this just might be a small obstacle.

9 Conclusion

TeX Live is the only TeX system in wide use across many hardware architectures and operating systems. The only comparable system, MiKTeX , is Windows-specific (although it contains some traces of ports to Unix). Backed by all the big user groups of TeX , TeX Live will remain the prime choice for the foreseeable future, and thus also TeX Live in Debian.

References

- [1] <https://goo.gl/3EkZu1>.
- [2] <https://goo.gl/GeY5e7>.
- [3] <https://goo.gl/oGb61o>.
- [4] <https://goo.gl/6rR5bs>.
- [5] <https://goo.gl/Hs4UkJ>.
- [6] <https://goo.gl/SrKtkI>.
- [7] <https://goo.gl/sz5BNj>.
- [8] The teTeX home page.
<http://tug.org/tetex/>.
- [9] `CHANGES.packaging`. <http://goo.gl/ukVYck>.
- [10] `texlive-bin` source package on Debian QA.
<https://goo.gl/MGmRd3>.

◇ Norbert Preining
Japan Advanced Institute of
Science and Technology
Nomi, Ishikawa, Japan
`norbert (at) preining dot info`
<http://www.preining.info>