A short overview of T_EX and its children …

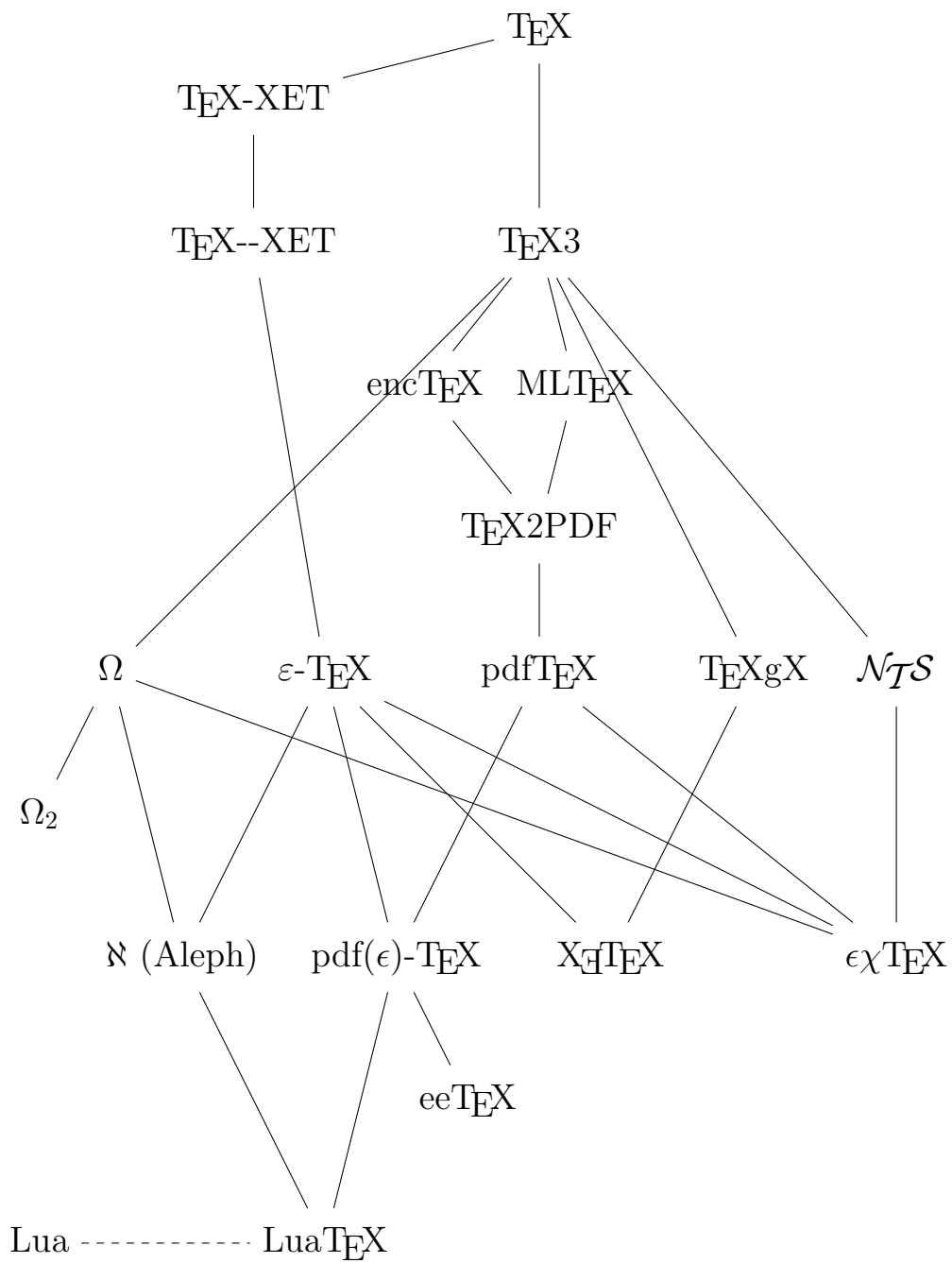Arno Trautmann*

This paper tries to give a short overview of the development of T_EX. The base frame is taken from the article A brief history of T_EX, volume II by Arthur Reutenauer in the proceedings of EuroBachoT_EX2007 and his talk there (see references). Additional information is taken from documentations (see references on page 6). All information is up to the date of the generated pdf. Everything here is without guarantee – this is just to get an overview. Consult the references for further (and/or correct) information!

Contents

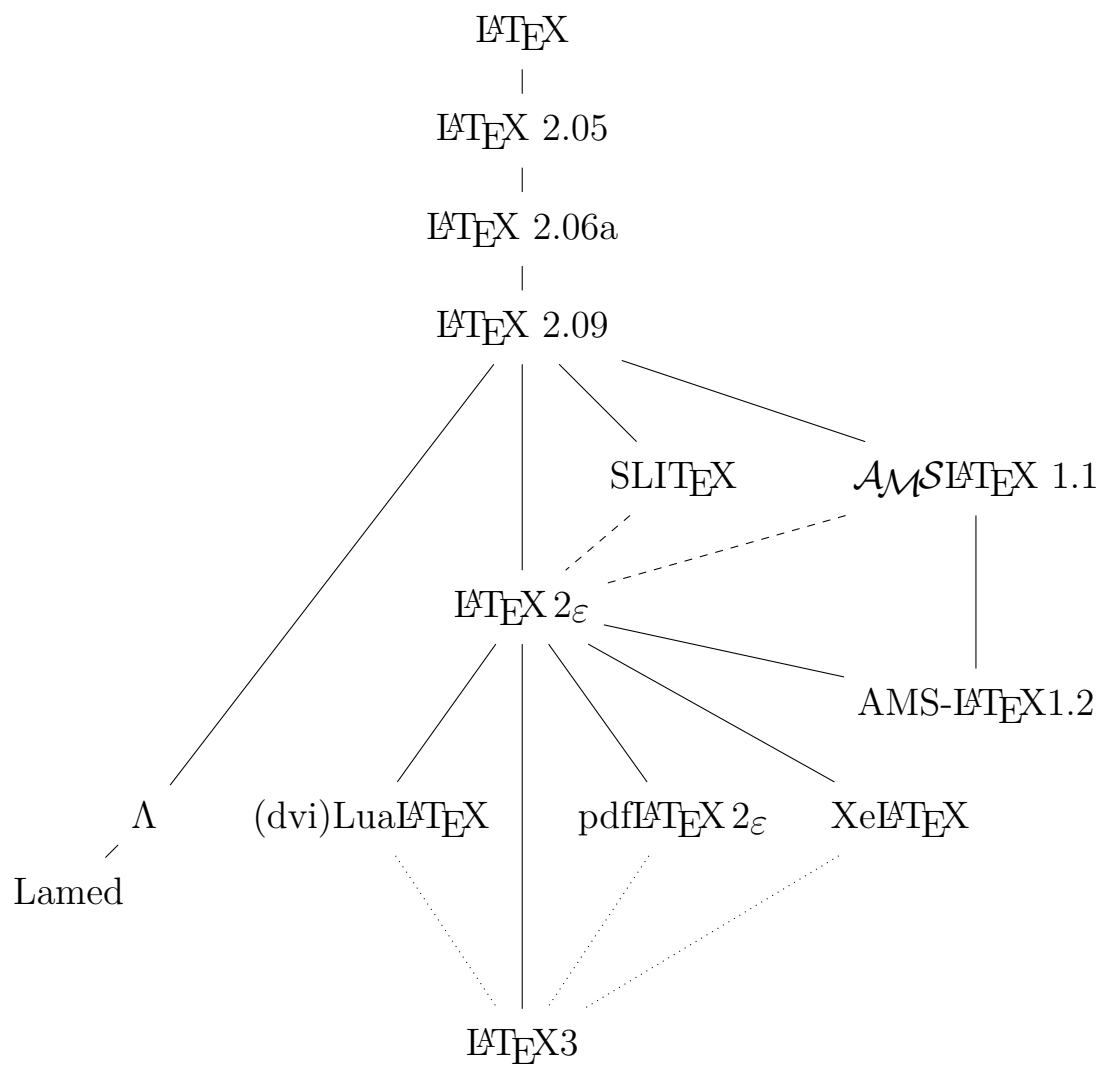
*arno.trautmann@gmx.de – Please feel free to mail me any suggestions and comments!

1 TₑX – the program, and extensions/derivatives

TₑX

TₑX-XET

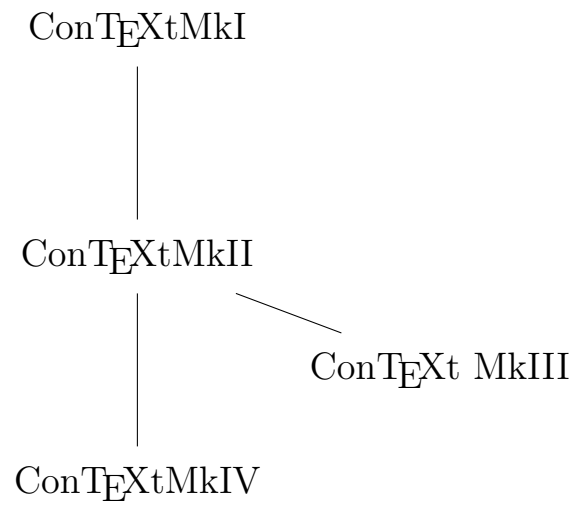TₑX--XET   TₑX3

encTₑX   MLTₑX

TₑX2PDF

Ω   ε-TₑX   pdfTₑX   TₑXgX   𝒩𝒯𝒮

Ω₂

ℵ (Aleph)   pdf(ε)-TₑX   X∃TₑX   εχTₑX

eeTₑX

Lua ----------- LuaTₑX

VTₑX

2 LaTeX (Lamport's TeX) – a format and large macro package for TeX

```
                           LaTeX
                             |
                         LaTeX 2.05
                             |
                        LaTeX 2.06a
                             |
                        LaTeX 2.09
                          /   |    \
                         /    |     \
                        /   SLITeX   AMSLaTeX 1.1
                       /      |  ·  ·  ·  ·  |
                      /    LaTeX 2ε          |
                     /    /  |  \  \         |
                    /    /   |   \   \    AMS-LaTeX1.2
                   /    /    |    \    \
                  Λ  (dvi)LuaLaTeX  pdfLaTeX 2ε  XeLaTeX
                 /       :   |   :        :
              Lamed      :   |   :        :
                         :   |   :        :
                          LaTeX3
```

3 ConTEXt – the other major format and TEX macro package

ConTEXtMkI

ConTEXtMkII

ConTEXt MkIII

ConTEXtMkIV

4 TEX's "little" helpers

This is a small section to mention programs that are very helpful and specially designed to support the work with TEX.

BIBTEX

References

The references are in order of occurance in the above document. I. e. if you want information about LuaTₑX, it will be below e. g. ϵTₑX.

Books

D.E. Knuth, D. Bibby, and I. Makai. *The TₑXbook*. Addison-Wesley Reading, MA, 1986.

F. Mittelbach, M. Goossens, J. Braams, D. Carlisle, C. Rowley, C. Detig, and J. Schrod. *The LATₑX companion*. Addison-Wesley, 2004.

Web Sources

Original Documentation – Engines

MLTₑX source (CH file) http://www.tex.ac.uk/tex-archive/systems/generic/mltex/mltex.ch

encTₑX page http://www.olsak.net/enctex.html

$\mathcal{N_{T}S}$ project page http://nts.tug.org

$\epsilon\chi$TₑX project page http://www.extex.org

eeTₑX project page http://tex.aanhet.net/eetex

LuaTₑX project page http://www.luatex.org

Original Documentation – Makro Packages/Formats

ConTₑXt wiki http://wiki.contextgarden.net

LATₑX project page http://www.latex-project.org

LATₑX3 project http://www.latex-project.org/latex3.html

Overview Articles

Arthur Reutenauer. A Brief History of TₑX. Talk at EuroBachoTₑX 2007. http://www.gust.org.pl/bachotex/EuroBachoTeX2007/presentations/bhot.pdf/view

A Brief History of LATₑX http://www.xent.com/FoRK-archive/feb98/0307.html

Short Article About Omega And Aleph http://www.tex.ac.uk/cgi-bin/texfaq2html?label=omegaleph

T_EX – the program, and extensions/derivatives

T_EX

born in 1978

T_EX-XET

The first extension to TeX, 1987. It was able to typeset in two directions, but only with a mark in the dvi to change the direction.

T_EX--XET

TeX–XeT was able to really put the glyphs on the right place in the dvi.

T_EX3

Ability to handle 8-bit input. 1989. TeX development was frozen in 1991.

encT_EX

A small extension to TeX, started 1997. Adds 10 new primitives relating input re-encoding

MLT_EX

Extension (started 1990) to TeX that allows hyphenation of words with accented letters. Distributed as a change file to the original WEB sources of TeX.

T_EX2PDF

Early name for pdfTeX.

Ω

Support for unicode-input. Still constrained on the output

ε-T_EX

the extension to TeX.

pdfT_EX

A new engine to directly produce pdf-files from TeX, without the need of dvi-ps-pdf. This allows to use microtypographic extensions and many other features of the pdf format.

T_EXgX

?

$\mathcal{N}_{\mathcal{T}}\mathcal{S}$

A project to completely reimplement TeX in Java. Now NTS is officially declared dead.

Ω_2

A short-time try to pick up the development of Omega again in 2006. Seemed more like a good plan and is now regarded as obsolete. LuaTeX is kind of a successor.

ℵ (Aleph)

originally named epsilon-Omega, an attempt to stabilize Omega while merging epsilon extensions.

X_ƎT_EX

This extension enables full multilingual support for left-to-right typesetting, right-to-left and almost any other possible direction. XeTeX also features support for OpenType and AAT-fonts.

εχTEX

Planned implementation of a high-quality typesetting system, written in Java. Based on experiences in NTS, eTeX, pdfTeX and Omega. Started in 2003, current version in repository is 0.0. (i. e. not very far ...)

pdf(ε)-TEX

Merging the pdfTeX engine with the eTeX-extensions. This engine can produce dvi (with or without the eTeX-extensions) as well as pdf (again, with or without extensions).

eeTEX

Experimental extension to pdfeTeX by Taco Hoekwater, created 2000. Distributed as change file.

Lua

Script language; has nothing to do with TeX!

LuaTEX

Still in heavy active development, LuaTeX will support unicode, OpenType and totally everything. It features an embedded scripting language, lua, making it easy to extend.

VTEX

Please insert information here ...

LATEX (Lamport's TEX) – a format and large macro package for TEX

LATEX

First mention (I found) is on p. 14f. TUGboat vol 4, Nr. 1, 1983

LATEX 2.05

? âĂe

LATEX 2.06a

Release of version 2.06a of the LaTeX macros. September 1984.

LATEX 2.09

The first official version by Leslie Lamport, 1985.

SLITEX

A variation of LaTeX2.09 to provide an easy way for producing presentations. In LaTeX2e absorbed as a documentclass (slides).

AMS LATEX 1.1

A port of SpivakâĂŹs AMS-TEXto LaTeX 2.09, released 1990

LATEX 2ε

June 1994: New release of LaTeX to avoid incompatible dialects of LaTeX 2.09. Introduced by the LaTeX3-Team.

AMS-LATEX1.2

A port of version 1.1 to LaTeX 2e by Downes and Jones.

pdfLaTeX 2ε

The standard LaTeX. If anyone talks about "LaTeX" it is nearly shure to be this package. pdfLaTeX2e produces pdf or dvi output.

XeLaTeX

Using the XeTeX engine. There are some special packages that provide easy access to the modern features of XeTeX.

(dvi)LuaLaTeX

LaTeX based on LuaTeX with pdf (standard) or dvi (dviLuaLaTeX) output. So far, LaTeX support for LuaTeX is not very elaborate.

Λ

A LaTeX-package for the omega-engine.

Lamed

A LaTeX-package for the aleph-engine.

LaTeX3

The planned successor of LaTeX2e. It is planned to implement a very elaborate low-level programming language. The expl3-package provides a test-implemantation that can be used in LaTeX2e.

ConTeXt – the other major format and TeX macro package

ConTeXtMkI

Original ConTeXt with Dutch low level interface.

ConTeXtMkII

ConTeXt with English low level interface. Works with any TeX-engine, like LaTeX: TeX, e-TeX, pdfTeX, Aleph, XeTeX, ...

ConTeXt MkIII

Reserved for future use for files supporting XeTeX. Has not been used yet.

ConTeXtMkIV

Specially designed for LuaTeX.

TeX's "little" helpers

BibTeX

Very helpful and important tool for creating bibliographies.