cTibTEX 0.6: Tibetan for TEX and LATEX 2ε

Oliver Corff*
corff@zedat.fu-berlin.de

July 1st, 2001

Abstract

cTibTEX is a package offering Tibetan support for TEX and LATEX 2ε. This package is based on earlier works by Schwartz, Sparkes, Sirlin, Steiner and Preining (and would not be possible without their contributions!) but in contrast to those the complete retransliteration process is built on the ligature functionality of TEX and Metafont, thus effectively eliminating the need for installing any external preprocessor or Ωmega.

Contents

*This work was partially funded by DFG (Deutsche Forschungsgemeinschaft) in context with the Mongolian Lexicography Project.

1 Introduction

Support for Tibetan has been available for the TeX and LaTeX user community for quite a few years thanks to the contributions of Ronald Schwartz, Jeff Sparkes, Dominik Wujastyk[1], Sam Sirlin[2] and Beat Steiner[3].

After studying these sources it became evident to me that these systems were composed mainly with a TeX and LaTeX user in mind who is willing to set up additional external software (the Latin–Tibetan converter/preprocessor) and who, in addition, is willing to cope with decidedly "non-TeX-ish" code constructs (like `%%`) for marking Tibetan language portions. I considered it useful if external preprocessors and unidiomatic code could be avoided at reasonable cost for the user, i. e. without introducing loads of `\ThisIsMySpecialTibetanLetter`-like commands. In addition, I appreciated the idea of a Tibetan support that seamlessly fits into the TeX and LaTeX 2_ε world—after the typical `\input␣...` or `\usepackage{...}` declaration, the user should ideally write something like `{\tib .bod skad.}` in order to obtain །བོད་སྐད། which implies that the retransliteration engine is realized somewhere in the realms of TeX and LaTeX.

The astute observer may inject that Norbert Preining made Tibetan support without preprocessor available in 1997 for the Ωmega system.[4] As long as the transition to Unicode and Ωmega has not been completed on a broad basis, I consider that there is still sufficient need for a LaTeX 2_ε-based Tibetan package. If its features were also usable in plain TeX, I decided not to frown.

1.1 Words of Thanks

Of course, there is D. E. Knuth who created TeX in the first place, and whose article on "The New Versions of TeX and METAFONT"[5] ignited the initial spark for building a transliteration engine as a pure, if not huge ligature table. Ongoing discussions about Tibetan transliteration issues with Wolfgang Lipp in the context of the Pentaglot Project were also very helpful. My special thanks go to Mr. Florian Reissinger for his patience while reviewing the glyph lists and his comments after proof-reading the test runs. The warm-hearted patience and understanding support by །ཕུན་ཚོགས་བདེ་སྐྱིད།

[1] URL: `CTAN://tex-archive/language/tibetan/original/`

[2] URL: `CTAN://tex-archive/language/tibetan/sirlin/`

[3] URL: `CTAN://tex-archive/language/tibetan/steiner/`

[4] The Ωmega home is: `http://www.ens.fr/omega`. Ωmega is also shipped with recent versions of Thomas Esser's teTeX (URL: `http://tug.org/teTeX/`), to name just one example.

Norbert Preining's adaption of Sirlin's fonts for Ωmega can be found at: `http://www.logic.at/people/preining/tex/tex.html`.

[5] Originally published in TUGboat 10 (1989), 325–328; 11 (1990), 12; studied in Knuth: *Digital Typography*, 1999, CSLI Publications, Stanford, California, p. 563–570.

and །བྱིན་པ། was essential for finishing this project.

1.2 Some Technical Notes

Readers who are not interested in the internals of cTibTeX can safely proceed to sections 2 and 3 of this text. The following notes are intended for those who want to get an understanding of the workings behind the scenes.

In cTibTeX, the Tibetan retransliteration system is based on the ligature mechanism located at the junction of Metafont and TeX. In order to implement the ligature mechanism Sirlin's Metafont sources were rearranged completely. A separate coding mechanism with symbolic character codes was introduced so that all character interaction (numbering, ligtable programs etc.) could be defined on a purely mnemonic basis, thus avoiding the cumbersome inflexibility of a fixed numbering scheme. During this work a mistaken glyph was discovered which appeared *twice*: a second *cwa* (ཙྭ་) showed up in the slot of *gwa* (གྭ་) while the *gwa* glyph was missing altogether. A new *gwa* was then built using outline fragments of other glyphs.[6] Some character definitions were then taken from Norbert Preining's work; I added a text symbol *visarga* (ཿ) into the font.

In a further step, the vowel bounding boxes for [*e i o*] were raised while several duplicate [*u*]s with gradually sinking bounding boxes were added. Vowels could then be combined with consonants by simple ligature and kerning instructions, effectively eliminating the need for any `\accent`-construction on the document side. The exact alignment of carrier consonant and vowel can now be fine-tuned in the ligature table (`ctibligs.mf` in the `mfinput` directory). While most of the conventional Tibetan words can be written easily in cTibTeX, the system, unlike Steiner's preprocessor, will fail with Sanskrit input as *buddha* which turns out as *བུདདྷ་ instead of བུདྡྷ་.

In cases like this users are requested to consult the vertical stacking command `\V{}{}` which allows explicite stacking of any desired letter combination.

Finally, a style file was created (`ctib.sty`) which provides the user interface to the Tibetan script and related commands. The style file calls font definition files which were created for accommodating future extensions like new script styles and typefaces.

In early summer 2001, contact with Sam Sirlin was renewed, who had released the version 6.0 of his Tibetan package in the meantime. A major feature was the greatly enriched collection of glyphs (additional ligatures, letter elements for combining new and rare letters, diacritical marks, etc.) which was then made available to cTibTeX.

[6] Alas! The mistaken *cwa* which wanted to be taken for a *gwa* even infiltrated Ωmega Tibetan...

2 Installation

Installation of this software package is straightforward: The installation procedure depends on the nature of the actual TeX system. The directory tree of e. g., teTeX is different from the emtex tree; hence the source archive `ctib4tex`*nn*`.zip` features the following subdirectories the contents of which has to be placed into appropriate branches of the TeX installation:

- `mfinput` holds the complete Metafont sources for the Tibetan fonts. The suggested path for emtex users is `\emtex\mfinput\ctib`; for teTeX users `$TEXMF/fonts/source/public/ctib` is a suitable choice.
- `tfm` holds all necessary font metrics files. The suggested path for emtex users is `\emtex\tfm\ctib`; for teTeX users `$TEXMF/fonts/tfm/public/ctib` is a suitable choice.
- `texinput` holds all style files, font encoding definitions etc. which are read by TeX and LaTeX 2_ε. The suggested path for emtex users is `\emtex\texinput\ctib`; for teTeX users `$TEXMF/tex/latex/ctib` is a suitable choice.
- `doc` contains the documentation (the document which you are reading right now). It can be placed in `\emtex\doc\ctib` (for emtex users) or `$TEXMF/doc/latex/ctib` (for teTeX users).

It may become necessary to rehash the directory database of the TeX system. When in doubt, consult your system administrator or local TeX wizard. On teTeX systems, the command `texhash` will perform this service.

3 User Commands

LaTeX 2_ε users activate Tibetan support for their documents via a `\usepackage` declaration

```
\documentclass[a4paper,11pt]{article}
\usepackage{ctib}
```

in the preamble of the document, while TeX users activate Tibetan support for their documents via an `\input␣` declaration

```
\input ctib
```

in the beginning of the document. The only command necessary is `\tib` which switches to Tibetan:

This is Tibetan: ༄༅། །བོད་སྐད།	`This is Tibetan:\\` `{\tib \swasti. .bod skad.}`

The *tsheg* is generated automatically after every syllable and can be inhibited by the command `\notsheg`. So, `\tib go` creates གོ་ whereas `\tib go\notsheg` creates གོ. The intersentence space after sentences ending in *k, g* is created by `\K` which removes the *tsheg* at the same time. Additional *tsheg*s are produced by commata `,` while the full stop `.` generates the *shad*, the exclamation mark `!` generates a *tsheg shad* and the colon `:` produces a *visarga*. `\swasti` can also be abbreviated as `@`. See also table 6 for a fairly complete overview of available special symbols.

The most important diacritics: *tsheg* inhibition via `\notsheg`.

`.` → །

`,` → ་

`:` → ཿ

`!` → ༏

`@` → ༄

Stacks of consonants used for expressing Sanskrit words are not necessarily contained in the basic glyph collection of cTibTEX. They can, however, be generated easily with the `\V{}{}`command (`V` like *vertical*). An abbreviation exists also for *om* which is `\om`.

ཨོཾ་མ་ཎི་པདྨེ་ཧཱུྃ་ཧྲཱིཿ

```
{\tib \om, ma nxi pa\V{de}{ma}
\hung \hrih:}
```

Abbreviations exist: དྨེ་ཨཻ།

```
Abbreviations exist:
{\tib \dme\ \ai.}
```

3.1 Transliteration Table

Unlike with Steiner's and Preining's systems, there is only one transliteration model available; at present the user has to accept what the system offers. Please consult the following tables for an overview of available symbols. Note: symbols which could be added with this version thanks to Sam Sirlin's recent work on Tibetan fonts were framed for easy identification.

3.2 Known Transliteration Problems

The transliteration services of cTibTEX are coded in the ligature table of the font implying that these services know a lot about adjacent letters but know next to nothing about Tibetan syllables. The approach follows thus always a "first match" and not a "correct match" method. It is hence possible that consonant clusters are converted to Tibetan glyphs in a manner which was not intended by the writer. The hyphen `-` helps solve these ambiguities:

The syllable *brtsams* is
བརྩམས་, not བྲྩམས་!

```
The syllable \emph{brtsams} is \\
{\tib b-rtsams}, not {\tib brtsams}!
```

3.3 Diacritical Marks

Thanks to Sam Sirlin's work, this version of cTibTEX provides a whole range of diacritical marks; most of them can be invoked with a rather lengthy com-

ཀ་	ཁ་	ག་	ང་
ka	*kha*	*ga*	*nga*
ཅ་	ཆ་	ཇ་	ཉ་
ca	*cha*	*ja*	*nya*
ཏ་	ཐ་	ད་	ན་
ta	*tha*	*da*	*na*
པ་	ཕ་	བ་	མ་
pa	*pha*	*ba*	*ma*
ཙ་	ཚ་	ཛ་	ཝ་
tsa	*tsha*	*dza*	*wa*
ཞ་	ཟ་	འ་	ཡ་
zha	*za*	*'a*	*ya*
ར་	ལ་	ཤ་	ས་
ra	*la*	*sha*	*sa*
ཧ་	ཨ་		
ha	*a*		

Table 1: cTibTEX in Transliteration and Tibetan: Alphabet

ཨ་	ཨི་	ཨུ་	ཨེ་	ཨོ་
a	*i*	*u*	*e*	*o*

Table 2: cTibTEX in Transliteration and Tibetan: Basic Vowels

ཊ་	ཋ་	ཌ་	ཎ་	ཥ་	ཀྵ་
txa	*thxa*	*dxa*	*nxa*	*shxa*	*kshxa*

Table 3: cTibTEX in Transliteration and Tibetan: Sanskrit letters

Seven basic consonants with aspiration *h* ཧ་ subjoined:

གྷ་	ཇྷ་	དྷ་	བྷ་	ཛྷ་	ཌྷ་	ལྷ་
gha	*jha*	*dha*	*bha*	*dzha*	*dxha*	*lha*

Nine basic consonants with *y* ཡ་ subjoined:

ཀྱ་	ཁྱ་	གྱ་	པྱ་	ཕྱ་	བྱ་	མྱ་	རྱ་	ཧྱ་
kya	*khya*	*gya*	*pya*	*phya*	*bya*	*mya*	*rya*	*hya*

Fifteen basic consonants with *r* ར་ subjoined:

ཀྲ་	ཁྲ་	གྲ་	ཏྲ་	ཐྲ་	དྲ་	པྲ་	
kra	*khra*	*gra*	*tra*	*thra*	*dra*	*pra*	
ཕྲ་	བྲ་	མྲ་	ཛྲ་	ཟྲ་	ཤྲ་	སྲ་	ཧྲ་
phra	*bra*	*mra*	*dzra*	*zra*	*shra*	*sra*	*hra*

Six basic consonants with *l* ལ་ subjoined:

ཀླ་	གླ་	བླ་	རླ་	སླ་	ཟླ་
kla	*gla*	*bla*	*rla*	*sla*	*zla*

Seventeen basic consonants with *wazur* subjoined:

ཀྭ་	ཁྭ་	གྭ་	ཅྭ་	ཆྭ་	ཉྭ་	ཏྭ་	དྭ་	ཙྭ་
kwa	*khwa*	*gwa*	*cwa*	*chwa*	*nywa*	*twa*	*dwa*	*tswa*
ཚྭ་	ཞྭ་	ཟྭ་	རྭ་	ལྭ་	ཤྭ་	སྭ་	ཧྭ་	
tshwa	*zhwa*	*zwa*	*rwa*	*lwa*	*shwa*	*swa*	*hwa*	

Twelve basic consonants with *r* ར་ surmounting them:

རྐ་	རྒ་	རྔ་	རྗ་	རྙ་	རྟ་
rka	*rga*	*rnga*	*rja*	*rnya*	*rta*
རྡ་	རྣ་	རྦ་	རྨ་	རྩ་	རྫ་
rda	*rna*	*rba*	*rma*	*rtsa*	*rdza*

Ten basic consonants with *l* ལ་ surmounting them:

ལྐ་	ལྒ་	ལྔ་	ལྕ་	ལྗ་	ལྟ་	ལྡ་	ལྤ་	ལྦ་	ལྷ་
lka	*lga*	*lnga*	*lca*	*lja*	*lta*	*lda*	*lpa*	*lba*	*lha*

Eleven basic consonants with *s* ས་ surmounting them:

སྐ་	སྒ་	སྔ་	སྙ་	སྟ་	སྡ་	སྣ་	སྤ་	སྦ་	སྨ་	སྩ་
ska	*sga*	*snga*	*snya*	*sta*	*sda*	*sna*	*spa*	*sba*	*sma*	*stsa*

Table 4: cTibTEX in Transliteration and Tibetan: Composites I

བྷྱ་	ནྲ་	ཌྷ་	དྲྭ་	གྲྭ་	ཕྱྭ་	རྒྭ་	རྩྭ་
bhya	*nra*	*dxha*	*drwa*	*grwa*	*phywa*	*rgwa*	*rtswa*
རྒྱ་	རྐྱ་	རྨྱ་	སྐྲ་	སྒྲ་	སྨྲ་	སྤྲ་	སྦྲ་
rgya	*rkya*	*rmya*	*skra*	*sgra*	*smra*	*spra*	*sbra*
སྒྱ་	སྐྱ་	སྨྱ་	སྤྱ་	སྦྱ་	སྣྲ་		
sgya	*skya*	*smya*	*spya*	*sbya*	*snra*		

Table 5: cTibTEX in Transliteration and Tibetan: Composites II

mand name, but for some of them there is also a short character mnemonic. Please consult table 6 on page 9.

4 Example

The following text, “The Story of *Yug-pa-ċan* the Brahman”, is blatantly stolen from Sirlin’s `/doc/` directory. Some of the input conventions have, however, changed slightly, and so the full text in romanized source and Tibetan target forms is given here. Please note that the word and sentence spaces are not identical with those of Sirlin’s and Steiner’s systems, hence the line and paragraph layout is not completely identical. Modifications of input syntax are shown in the margins.

> `\swasti.␣` .yul zhig na bram ze dbyug pa can zhes bya zhig ’dug ste. rab du dbul ’phongs pa bza’ ba dang,. bgo med pa zhig go. des khyim bdag cig las ba glang zhig b-rnyes te. nyin par spyad nas ba glang de khrid de khyim bdag de’i khyim du song ba dang,. de na khyim bdag ni zan za ste. dbyug pa can gyis ba glang de khyim gyi nang du btang ba dang,. ba glang sgo gzhan du song nas stor ro.. khyim bdag de zan de zos nas langs pa dang,. de na ba glang ma mthong nas des dbyug pa can la glang ga re zhes byas pa dang,. des smras pa. khyod kyi khyim du btang ngo,. .khyod kyis nga’i glang bor gyis slar byin cig ces smras pa dang,. des smras pa. ngas ma bor ro.. de nas de gnyis ’grogs te. rgyal po’i thad du ’dong ba dang,. ’u bu cag gi rigs pa dang mi rigs pa rtog par ’gyur ro zhes smras nas de gnyis dong ba dang,. mi gzhan zhig gi rta rgod ma zhig bros nas. des dbyug pa can la smras pa. rgod ma ma btang zhes smras pa dang,. des rdo zhig blangs te ’phangs pa dang rta’i rkang pa la phog nas rkang

Generic Name	Alternative	Symbol
\tibvarfive		
\tibvarsix		
\tibvarseven		
\tibvareight		
\tibvarnine		
\tibempty		
\tibShad	.	
\tibTsheg	,	
\tibSwasti	\swasti	
\tibVisarga	:	
\tibTshegshad	!	
\tibAlttshegshad		
\tibNyistshegshad		
\tibChemgoshad		
\tibSbrulshad		
\tibRgyagramshad		
\tibVarchemgoshad		
\tibRjessungaro		
\tibSnaldan		
\tibRnambcad		
\tibGtertsheg		
\tibRinchenspungsshad		
\tibTopiniyigmgomdunma	(	
\tibFinalyigmgomdunma	)	
\tibIniyigmgomdunma	((	
\tibAngkhyanggyon	<	
\tibAngkhyanggyas	>	
\tibHalanta		
\tibLcirtags		
\tibNyizlanaada		
\tibHalf		
\tibGteryigmgotr		
\tibPaluta		

Table 6: cTibTeX Special Diacritics

pa bcag go\K .des smras pa. khyod kyis nga'i rta bsad kyis nga'i rta byin cig\K .ci'i phyir rta sbyin. des smras pa tshur shog\K .rgyal po'i drung du 'dong dang,. 'u bu cag gi zhal che gcod du 'ong ngo zhes smras nas. de dag der song ba dang,. dbyug pa can des 'bras par b-rtsams te. des rtsig pa zhig gi steng nas mchongs pa dang,. de'i drung na tha ga pa zhig thags 'thag cing 'dug pa de'i steng du lhung nas tha ga pa de tshe 'phos pa dang,. tha ga pa'i chung mas dbyug pa can de bzung nas. khyod kyis nga'i khyo bsad kyis nga'i khyo byin zhig ces smras pa dang,. ngas khyod kyi khyo ci ltar sbyin zhes smras nas. tshur shog rgyal po'i drung du 'dong ngo,.. des 'u bu cag gi zhal ce gcad do zhes dong ba las. lam gyi bar na chu bo gting zab po zhig yod de. chu de'i nang nas tshur shing mkhan zhig te'u kha na 'khyer te 'ong ngo,. de la dbyug pa can gyis chu'i gting ci tsam zhes dris pa dang,. chu'i gting zab bo zhes smras pas ste'u chur lhung ste. ste'u ma rnyer pa dang,. des dbyug pa can bzung nas. khyod kyis nga'i ste'u chur bskyur ro.. des smras pa ngas ma bskyer ro. .tshur shog rgyal po'i drung du 'dong dang,. des 'u bu cag gi zhal che gcad do zhes smras nas dong ngo,. …*continued*…

\K eliminates the *tsheg* and inserts a long space.

༄༅། །ཡུལ་ཞིག་ན་བྲམ་ཟེ་དབྱུག་པ་ཅན་ཞེས་བྱ་ཞིག་
འདུག་སྟེ། རབ་དུ་དབུལ་འཕོངས་པ་བཟའ་བ་དང་། བགོ་
མེད་པ་ཞིག་གོ། དེས་ཁྱིམ་བདག་ཅིག་ལས་བ་གླང་ཞིག་
བརྙེས་ཏེ། ཉིན་པར་སྤྱད་ནས་བ་གླང་དེ་ཁྲིད་དེ་ཁྱིམ་བདག་
དེའི་ཁྱིམ་དུ་སོང་བ་དང་། དེ་ན་ཁྱིམ་བདག་ནི་ཟན་ཟ་སྟེ།
དབྱུག་པ་ཅན་གྱིས་བ་གླང་དེ་ཁྱིམ་གྱི་ནང་དུ་བཏང་བ་དང་། བ་
གླང་སྒོ་གཞན་དུ་སོང་ནས་སྟོར་རོ།། ཁྱིམ་བདག་དེ་ཟན་དེ་ཟོས་
ནས་ལངས་པ་དང་། དེ་ན་བ་གླང་མ་མཐོང་ནས་དེས་དབྱུག་པ་
ཅན་ལ་གླང་ག་རེ་ཞེས་བྱས་པ་དང་། དེས་སྨྲས་པ། ཁྱོད་ཀྱི་
ཁྱིམ་དུ་བཏང་ངོ་། །ཁྱོད་ཀྱིས་ངའི་གླང་བོར་གྱིས་སླར་བྱིན་ཅིག་
ཅེས་སྨྲས་པ་དང་། དེས་སྨྲས་པ། ངས་མ་བོར་རོ།། དེ་
ནས་དེ་གཉིས་འགྲོགས་ཏེ། རྒྱལ་པོའི་ཐད་དུ་འདོང་བ་དང་།
ཨུ་བུ་ཅག་གི་རིགས་པ་དང་མི་རིགས་པ་རྟོག་པར་འགྱུར་རོ་ཞེས་

སྨྲས་ནས་དེ་གཉིས་དོང་བ་དང་། མི་གཞན་ཞིག་གི་རྟ་རྒོད་མ་ཞིག་ཁྲིད་ནས། དེས་དབྱུག་པ་ཅན་ལ་སྨྲས་པ། རྒོད་མ་མ་བཏང་ཞེས་སྨྲས་པ་དང་། དེས་རྡོ་ཞིག་བླངས་ཏེ་འཕངས་པ་དང་རྟའི་རྐང་པ་ལ་ཕོག་ནས་རྐང་པ་བཅག་གོ །དེས་སྨྲས་པ། ཁྱོད་ཀྱིས་ངའི་རྟ་བསད་ཀྱིས་ངའི་རྟ་བྱིན་ཅིག །ཅིའི་ཕྱིར་རྟ་སྦྱིན། དེས་སྨྲས་པ་ཚུར་ཤོག །རྒྱལ་པོའི་དྲུང་དུ་འདོང་དང་། འུ་བུ་ཅག་གི་ཞལ་ཆེ་གཅོད་དུ་འོང་ངོ་ཞེས་སྨྲས་ནས། དེ་དག་དེར་སོང་བ་དང་། དབྱུག་པ་ཅན་དེས་འབྲས་པར་བརྩམས་ཏེ། དེས་རྩིག་པ་ཞིག་གི་སྟེང་ནས་མཆོངས་པ་དང་། དེའི་དྲུང་ན་ཐ་ག་པ་ཞིག་ཐགས་འཐག་ཅིང་འདུག་པ་དེའི་སྟེང་དུ་ལྷུང་ནས་ཐ་ག་པ་དེ་ཆེ་འཕོས་པ་དང་། ཐ་ག་པའི་ཆུང་མས་དབྱུག་པ་ཅན་དེ་བཟུང་ནས། ཁྱོད་ཀྱིས་ངའི་ཁྱོ་བསད་ཀྱིས་ངའི་ཁྱོ་བྱིན་ཞིག་ཅེས་སྨྲས་པ་དང་། ངས་ཁྱོད་ཀྱི་ཁྱོ་ཅི་ལྟར་སྦྱིན་ཞེས་སྨྲས་ནས། ཚུར་ཤོག་རྒྱལ་པོའི་དྲུང་དུ་འདོང་ངོ་།། དེས་འུ་བུ་ཅག་གི་ཞལ་ཆེ་གཅད་དོ་ཞེས་དོང་བ་ལས། ལམ་གྱི་བར་ན་ཆུ་བོ་གཉིང་ཟབ་པོ་ཞིག་ཡོད་དེ། ཆུ་དེའི་ནང་ནས་ཚུར་ཤིང་མཁན་ཞིག་སྟེའུ་ཁ་ན་འཁྱེར་ཏེ་འོང་ངོ་། དེ་ལ་དབྱུག་པ་ཅན་གྱིས་ཆུའི་གཉིང་ཅི་ཙམ་ཞེས་དྲིས་པ་དང་། ཆུའི་གཉིང་ཟབ་བོ་ཞེས་སྨྲས་པས་སྟེའུ་ཆུར་ལྷུང་སྟེ། སྟེའུ་མ་རྙེད་པ་དང་། དེས་དབྱུག་པ་ཅན་བཟུང་ནས། ཁྱོད་ཀྱིས་ངའི་སྟེའུ་ཆུར་བསྒྱུར་རོ།། དེས་སྨྲས་པ་ངས་མ་བསྐྱེར་རོ། །ཚུར་ཤོག་རྒྱལ་པོའི་དྲུང་དུ་འདོང་དང་། དེས་འུ་བུ་ཅག་གི་ཞལ་ཆེ་གཅད་དོ་ཞེས་སྨྲས་ནས་དོང་ངོ་།

\K eliminates the *tsheg* and inserts a long space.

. . . continued . . .

5 Legal Issues

cTibTEX is published under the GNU Public Licence. And very much like I did when I picked up the work of my predecessors and changed a few things here and there, I warmly welcome to change and improve everything, but then: please rename the files. If not for the sake of source protection, then at least for making sure that various TEX installations around the world do not get confused.

6 Outlook and Desiderata

At the time of this writing, cTibTEX is actually already outdated as Ωmega, the Unicode-capable TEX successor, is available. Why, then, did I undergo this effort? I needed Tibetan now, for ongoing Mongolian lexicographical work which is all done using LATEX 2_ε and MonTEX.

Though the font provided by Schwartz, Sparkes and Sirlin is already useful, I keep dreaming of a true Tibetan *Meta*font, not just outlines created by GNU `fontutils`. Such a genuine metafont would greatly facilitate the creation of new and different typefaces, at least with different weights, and the few Unicode characters not yet covered could then be produced easily.

Though this is a work slightly more targeted at Ωmega than at LATEX 2_ε, I am seriously considering preparing full-fledged Native Language Support for the standard document formats implying that all captions and the date and number formats have to be translated into Tibetan. With transliteration services provided internally, it should also be possible to integrate Tibetan into the Babel system.

Anyway, whatever the mistakes and the shortcomings are that have now crept into this Tibetan system, I can only kindly ask you to blame me, not my predecessors any more.