

cTibT_EX 0.6:
Tibetan for T_EX and L^AT_EX 2_ε

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Abstract

cTibT_EX is a package offering Tibetan support for T_EX and L^AT_EX 2_ε. 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 T_EX and Metafont, thus effectively eliminating the need for installing any external preprocessor or Ωmega.

Contents

1	Introduction	2
1.1	Words of Thanks	2
1.2	Some Technical Notes	3
2	Installation	4
3	User Commands	4
3.1	Transliteration Table	5
3.2	Known Transliteration Problems	5
3.3	Diacritical Marks	5
4	Example	8
5	Legal Issues	12
6	Outlook and Desiderata	12

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1 Introduction

Support for Tibetan has been available for the T_EX and L^AT_EX user community for quite a few years thanks to the contributions of Ronald Schwartz, Jeff Sparkes, Dominik Wujastyk¹, Sam Sirlin² and Beat Steiner³.

After studying these sources it became evident to me that these systems were composed mainly with a T_EX and L^AT_EX 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-T_EX-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 T_EX and L^AT_EX 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 T_EX and L^AT_EX.

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

1.1 Words of Thanks

Of course, there is D. E. Knuth who created T_EX in the first place, and whose article on “The New Versions of T_EX 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 ལུན་ཚོགས་བདེ་སྲིད།

¹URL: [CTAN://tex-archive/language/tibetan/original/](http://ctan://tex-archive/language/tibetan/original/)

²URL: [CTAN://tex-archive/language/tibetan/sirlin/](http://ctan://tex-archive/language/tibetan/sirlin/)

³URL: [CTAN://tex-archive/language/tibetan/steiner/](http://ctan://tex-archive/language/tibetan/steiner/)

⁴The Omega home is: <http://www.ens.fr/omega>. Omega 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 Omega can be found at: <http://www.logic.at/people/preining/tex/tex.html>.

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

and །ཁྱིམ་གྱི། was essential for finishing this project.

1.2 Some Technical Notes

Readers who are not interested in the internals of cTibT_EX 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 cTibT_EX, the Tibetan retransliteration system is based on the ligature mechanism located at the junction of Metafont and T_EX. 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* (མྱ་) showed up in the slot of *gwa* (གྱ་) 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* (ཤ) 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 cTibT_EX, the system, unlike Steiner's preprocessor, will fail with Sanskrit input as *buddha* which turns out as *བུདྡ་ཏཱ་ instead of བུདྡ་ཏཱ་.

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 cTibT_EX.

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

2 Installation

Installation of this software package is straightforward: The installation procedure depends on the nature of the actual T_EX system. The directory tree of e.g., teTeX is different from the emtex tree; hence the source archive ctib4texnn.zip features the following subdirectories the contents of which has to be placed into appropriate branches of the T_EX 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 T_EX and L^AT_EX_{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 T_EX system. When in doubt, consult your system administrator or local T_EX wizard. On teTeX systems, the command `texhash` will perform this service.

3 User Commands

L^AT_EX_{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 T_EX users activate Tibetan support for their documents via an `\inputL` declaration

```
\input ctib
```

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

This is Tibetan:
 | 

```
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 *tshegs* 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.

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`.

The most important diacritics: *tsheg* inhibition via `\notsheg`.
 . → |
 , → ·
 : → འོ
 ! → འོ

འོ་མ་ཤི་བདེ་ལྷོ་འཕྲོ་འཕྲོ་འཕྲོ་

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

@ → འོ

Abbreviations exist: འོ་འཕྲོ་

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 འཕྲོ་མས་, not འཕྲོ་མས་!

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

Table 1: cTibTeX in Transliteration and Tibetan: Alphabet

ཨ་	ཨི་	ཨུ་	ཨེ་	ཨོ་
<i>a</i>	<i>i</i>	<i>u</i>	<i>e</i>	<i>o</i>

Table 2: cTibTeX in Transliteration and Tibetan: Basic Vowels

ཏ་	ཐ་	ད་	ན་	ཤ་	ས་
<i>txa</i>	<i>thxa</i>	<i>dx</i>	<i>nx</i>	<i>shxa</i>	<i>kshxa</i>

Table 3: cTibTeX in Transliteration and Tibetan: Sanskrit letters

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

ཀ་	ཁ་	ག་	ང་	ཅ་	ཆ་	ཇ་
<i>gha</i>	<i>jha</i>	<i>dha</i>	<i>bha</i>	<i>dzha</i>	<i>dxha</i>	<i>lha</i>

Nine basic consonants with *y* ཡ་ subjoined:

ཀྱ་	ཁྱ་	གྱ་	པྱ་	ཕྱ་	བྱ་	མྱ་	རྱ་	ཧྱ་
<i>kya</i>	<i>khya</i>	<i>gya</i>	<i>pya</i>	<i>phya</i>	<i>bya</i>	<i>mya</i>	<i>rya</i>	<i>hya</i>

Fifteen basic consonants with *r* ར་ subjoined:

ཀྲ་	ཁྲ་	གྲ་	ཏྲ་	ཅྲ་	ཆྲ་	ཇྲ་	
<i>kra</i>	<i>khra</i>	<i>gra</i>	<i>tra</i>	<i>thra</i>	<i>dra</i>	<i>pra</i>	
མྲ་	བྲ་	མྲ་	ཏྲ་	ཏྲ་	ཤྲ་	སྲ་	ཨྲ་
<i>phra</i>	<i>bra</i>	<i>mra</i>	<i>dzra</i>	<i>zra</i>	<i>shra</i>	<i>sra</i>	<i>hra</i>

Six basic consonants with *l* ལ་ subjoined:

ཀླ་	ཁླ་	གླ་	ཏླ་	ཅླ་	ཇླ་
<i>kla</i>	<i>gla</i>	<i>bla</i>	<i>rla</i>	<i>sla</i>	<i>zla</i>

Seventeen basic consonants with *wazur* subjoined:

ཀྱ་	ཁྱ་	གྱ་	ཅྱ་	ཆྱ་	ཇྱ་	ཏྱ་	ཏྱ་	ཏྱ་	ཏྱ་
<i>kwa</i>	<i>khwa</i>	<i>gwa</i>	<i>cwa</i>	<i>chwa</i>	<i>nywa</i>	<i>twa</i>	<i>dwa</i>	<i>tswa</i>	
ཏྱ་	ཏྱ་	ཏྱ་	ཏྱ་	ཏྱ་	ཏྱ་	ཏྱ་	ཏྱ་	ཏྱ་	
<i>tshwa</i>	<i>zhwa</i>	<i>zwa</i>	<i>rwa</i>	<i>lwa</i>	<i>shwa</i>	<i>swa</i>	<i>hwa</i>		

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

ཀྲ་	ཁྲ་	རྲ་	རྲ་	རྲ་	རྲ་
<i>rka</i>	<i>rga</i>	<i>rnga</i>	<i>rja</i>	<i>rnya</i>	<i>rta</i>
རྲ་	རྲ་	རྲ་	རྲ་	རྲ་	རྲ་
<i>rda</i>	<i>rna</i>	<i>rba</i>	<i>rma</i>	<i>rtsa</i>	<i>rdza</i>

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

ཀླ་	ཁླ་	ལླ་	ལླ་	ལླ་	ལླ་	ལླ་	ལླ་	ལླ་	ལླ་
<i>lka</i>	<i>lga</i>	<i>lnga</i>	<i>lca</i>	<i>lja</i>	<i>lta</i>	<i>lda</i>	<i>lpa</i>	<i>lba</i>	<i>lha</i>

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

ཀླ་	ཁླ་	སླ་	སླ་	སླ་	སླ་	སླ་	སླ་	སླ་	སླ་	སླ་
<i>ska</i>	<i>sga</i>	<i>snga</i>	<i>snya</i>	<i>sta</i>	<i>sda</i>	<i>sna</i>	<i>spa</i>	<i>sba</i>	<i>sma</i>	<i>stsa</i>

Table 4: cTibTeX in Transliteration and Tibetan: Composites I























							
<i>bhya</i>	<i>nra</i>	<i>dxha</i>	<i>drwa</i>	<i>grwa</i>	<i>phywa</i>	<i>rgwa</i>	<i>rtswa</i>
							
<i>rgya</i>	<i>rkya</i>	<i>rmya</i>	<i>skra</i>	<i>sgra</i>	<i>smra</i>	<i>spra</i>	<i>sbra</i>
							
<i>sgya</i>	<i>skya</i>	<i>smya</i>	<i>spya</i>	<i>sbya</i>	<i>snra</i>		

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-can* 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
'gros 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
<code>\tibvarfive</code>		ཕ
<code>\tibvarsix</code>		ཆ
<code>\tibvarseven</code>		ཇ
<code>\tibvareight</code>		ཉ
<code>\tibvarnine</code>		མ
<code>\tibempty</code>		◯
<code>\tibShad</code>	.	◌་
<code>\tibTsheg</code>	,	◌།
<code>\tibSwasti</code>	<code>\swasti</code>	།
<code>\tibVisarga</code>	:	◌འི་
<code>\tibTshegshad</code>	!	◌།་
<code>\tibAltshegshad</code>		◌།་།
<code>\tibNyistshegshad</code>		◌།་།་།
<code>\tibChemgoshad</code>		◌།་།་།་།
<code>\tibSbrulshad</code>		◌།་།་།་།་།
<code>\tibRgyagramshad</code>		◌།་།་།་།་།་།
<code>\tibVarchemgoshad</code>		◌།་།་།་།་།་།་།
<code>\tibRjessungaro</code>		◌་།་།་།་།་།
<code>\tibSnaldan</code>		◌་།་།་།་།
<code>\tibRnambcad</code>		◌་།་།་།་།་།་།
<code>\tibGtersheg</code>		◌་།་།་།་།་།་།་།
<code>\tibRinchenspungsshad</code>		◌་།་།་།་།་།་།་།་།
<code>\tibTopiniyigmgomdunma</code>	(།
<code>\tibFinalyigmgomdunma</code>)	།
<code>\tibIniyigmgomdunma</code>	((།།
<code>\tibAngkhyanggyon</code>	<	།
<code>\tibAngkhyanggyas</code>	>	།
<code>\tibHalanta</code>		།
<code>\tibLcirtags</code>		།
<code>\tibNyizlanaada</code>		།
<code>\tibHalf</code>		།
<code>\tibGteryigmgotr</code>		།
<code>\tibPaluta</code>		།

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 zhid gi steng nas mchongs pa dang,. de'i drung na tha ga pa zhid thags 'thag cing 'dug pa de'i steng du lung 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 zhid 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 zhid yod de. chu de'i nang nas tshur shing mkhan zhid 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 lung ste. ste'u ma rnyer pa dang,. des dbyug pa can bzung nas. khyod kyis nga'i ste'u chur bskyer 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་ ཅུ་ རྒྱུ་ ཟེ་ དབྱུག་ བ་ ཅན་ ཞེས་ བྱ་ ཞིག་
 འདུག་ ལྟེ། རབ་ ཏུ་ དབྱུལ་ འཕོངས་ བ་ བཟའ་ བ་ དང་། བཞོ་
 མེད་ བ་ ཞིག་ ཞོ། དེས་ བྱིས་ བདག་ ཅིག་ ལས་ བ་ གླང་ ཞིག་
 བརྟེས་ ཏེ། ཅིན་ བར་ ལྷུང་ ཅས་ བ་ གླང་ དེ་ བྱིད་ དེ་ བྱིས་ བདག་
 དེའི་ བྱིས་ ཏུ་ སོང་ བ་ དང་། དེ་ ཅན་ བྱིས་ བདག་ ཅི་ ཟན་ ཟ་ ལྟེ།
 དབྱུག་ བ་ ཅན་ བྱིས་ བ་ གླང་ དེ་ བྱིས་ བྱི་ ཅན་ ཏུ་ བཏང་ བ་ དང་། བ་
 གླང་ ལྟེ་ བཞུན་ ཏུ་ སོང་ ཅས་ ལྷུང་ རོ། བྱིས་ བདག་ དེ་ ཟན་ དེ་ ཟོས་
 ཅས་ ལངས་ བ་ དང་། དེ་ ཅན་ བ་ གླང་ མ་ མཐོང་ ཅས་ དེས་ དབྱུག་ བ་
 ཅན་ ལ་ གླང་ བ་ དེ་ ཞེས་ བྱས་ བ་ དང་། དེས་ ལྷུས་ བ། བྱིད་ བྱི་
 བྱིས་ ཏུ་ བཏང་ རོ། བྱིད་ བྱིས་ འདི་ གླང་ བོར་ བྱིས་ ལྷུང་ བྱིན་ ཅིག་
 ཅེས་ ལྷུས་ བ་ དང་། དེས་ ལྷུས་ བ། འས་ མ་ བོར་ རོ། དེ་
 ཅས་ དེ་ བཞུན་ འགྲོགས་ ཏེ། ལྷུ་ བོའི་ བཏང་ ཏུ་ འདོང་ བ་ དང་།
 ལུ་ བྱ་ ཅག་ བྱི་ རིགས་ བ་ དང་ མི་ རིགས་ བ་ རྟོག་ བར་ འགྱུར་ རོ་ ཞེས་

ལྷོས་ནས་དེ་གཉིས་དོང་བ་དང། མི་གཞན་ཞིག་གི་དྲ་ཚོད་མ་
 ཞིག་བྲོས་ནས། དེས་དབྱུག་པ་ཅན་ལ་ལྷོས་པ། ཚོད་མ་མ་
 བཏང་ཞེས་ལྷོས་པ་དང། དེས་རྩོ་ཞིག་གྲངས་དེ་འཕངས་པ་
 དང་དེའི་ཀང་པ་ལ་ཕོག་ནས་ཀང་པ་བཅག་གོ། །དེས་ལྷོས་པ།
 རྩོད་ཀྱིས་ངའི་དྲ་བསད་ཀྱིས་ངའི་དྲ་བྱིན་ཅིག། །ཅིའི་སྤྱིར་དྲ་སྤྱིན།
 དེས་ལྷོས་པ་ཚུར་ཤོག། །རྒྱལ་པོའི་རྒྱང་དུ་འདོང་དང། ཅུ་
 བྱ་ཅག་གི་ཞལ་ཆེ་གཙང་དུ་འོང་ངོ་ཞེས་ལྷོས་ནས། དེ་དག་
 དེར་སོང་བ་དང། དབྱུག་པ་ཅན་དེས་འབྲས་པར་བཅུམས་དེ།
 དེས་ཚིག་པ་ཞིག་གི་སྤྱང་ནས་མཚོངས་པ་དང། དེའི་རྒྱང་ན་ཐ་
 ག་པ་ཞིག་ཐགས་འཐག་ཅིང་འདུག་པ་དེའི་སྤྱང་དུ་སྤྱང་ནས་ཐ་ག་
 པ་དེ་ཆེ་འཕོས་པ་དང། ཐ་ག་པའི་རྒྱང་མས་དབྱུག་པ་ཅན་དེ་
 བརྒྱང་ནས། རྩོད་ཀྱིས་ངའི་རྩོད་བསད་ཀྱིས་ངའི་རྩོད་བྱིན་ཞིག་
 ཅེས་ལྷོས་པ་དང། ངས་རྩོད་ཀྱི་རྩོད་ཅི་ལྟར་སྤྱིན་ཞེས་ལྷོས་ནས།
 ཚུར་ཤོག་རྒྱལ་པོའི་རྒྱང་དུ་འདོང་ངོ་། །དེས་ཅུ་བྱ་ཅག་གི་ཞལ་
 ཅེ་གཙང་དོ་ཞེས་དོང་བ་ལས། ལམ་གྱི་བར་ན་རྒྱ་བོ་གདོང་ཟབ་
 པོ་ཞིག་ཡོད་དེ། རྒྱ་དེའི་ནང་ནས་རྒྱར་ཤིང་མཁམ་ཞིག་དེའུ་ཁ་
 ན་འབྱེར་དེ་འོང་ངོ་། དེ་ལ་དབྱུག་པ་ཅན་གྱིས་རྒྱའི་གདོང་ཅི་
 ཅམ་ཞེས་དྲིས་པ་དང། རྒྱའི་གདོང་ཟབ་པོ་ཞེས་ལྷོས་པས་སྤྱེའུ་
 རྒྱར་སྤྱང་སྤྱེ། སྤྱེའུ་མ་རྩེར་པ་དང། དེས་དབྱུག་པ་ཅན་
 བརྒྱང་ནས། རྩོད་ཀྱིས་ངའི་སྤྱེའུ་རྒྱར་བསྐྱར་རོ། །དེས་ལྷོས་
 པ་ངས་མ་བསྐྱར་རོ། །རྒྱར་ཤོག་རྒྱལ་པོའི་རྒྱང་དུ་འདོང་དང།
 དེས་ཅུ་བྱ་ཅག་གི་ཞལ་ཆེ་གཙང་དོ་ཞེས་ལྷོས་ནས་དོང་ངོ་།

\K elimi-
 nates 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 Omega, 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 L^AT_EX 2_ε and MonTeX.

Though the font provided by Schwartz, Sparkes and Sirlin is already useful, I keep dreaming of a true Tibetan *Metafont*, 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 Omega than at L^AT_EX 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.