

ཚུམ་པའི་བོད་ཡིག

TSAMPA KEYBOARD FONT

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<http://tsampa.org/tibetan/software/tsamkey/>

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I. INTRODUCTION

This is an attempt at creating a Tibetan font that can be used directly from the keyboard without an driver or any other external software; just change the font to Tsampa Keyboard and type away in Wylie transliteration. This lack of external drivers means that the font should work on any platform and in any software that supports True Type fonts. Good candidates are applications where input macros cannot be used, applications that support only one font (non-Unicode Tibetan fonts are typically divided into several font files) or where it is not practical to cut and paste from a Tibetan enabled word processor. The typographic limitations imposed by the keyboard mapping makes Tsampa Keyboard less than ideal for publishing, except where dictated by circumstance (such as database printouts). If you are considering using the font in printed matter, you might want to print out the sample texts in section VIII beforehand to make sure the quality is good enough for your purpose (although the scaling of some ligatures might be somewhat off at some point sizes, they should print properly).

The idea of a keyboard Tibetan font is not mine; the idea started brewing after I first saw the freeware font Ü-chan¹ sometimes in the late 90s. Its typographic virtues where nothing to brag about, but I found the way it was mapped to the keyboard brilliant. One rainy Tibetan day in the spring of 2001, I finally decided to try making a keyboard font that would retain the intuitiveness of Ü-chan while making fewer typographic compromises. I did not specifically need such a font for anything, and found the prototype of another Tibetan typeface I was working on adequate for this experiment. I rescaled the glyphs to work as individual building blocks and made the keyboard mapping slightly more complex to allow for better typography and basic Tibetanized Sanskrit support. At some point I might sit down and polish the glyphs, spacing and kerning, but for now I am happy with the result. I also warmly invite anyone interested to take the project from here and have licensed this work accordingly (see section II).

Besides honing the particulars, there are also a few empty slots where additional glyphs could be placed. It would also be possible to add about 80 additional glyphs into the higher slots accessible through their numeral values (ALT + the ASCII value). This would allow for quite extensive Sanskrit support suitable for work that only occasionally requires these; typing in several three-number combinations just to build one ligature is a tedious process. Let me know if you have any glyph suggestions or thoughts about the key mapping.

II. LICENSE

Tsampa Keyboard and this document are released under the GNU Lesser General Public License (LGPL). The gist of it is that you are permitted to distribute them as you see fit, as well as make any modifications to them as long as they too are LGPL'd and attribution of the original work is given. The license also permits you to use and distribute them with any non-free software (such as databases). For the full license, see Appendix A.

¹ The Ü-chen font can be downloaded from <http://babel.uoregon.edu/yamada/fonts/tibetan.html>. I have no idea of its origin, if anyone knows where it came from I would be interested in hearing about it.

I warmly invite anyone to modify the font and documentation as they see fit in accordance with the license; if I like the modifications I might fold them back into the main release. I would appreciate it if you would let me know of any modifications you make.

A separate source package containing this document in rtf format and the Fontographer source file can be downloaded from the Tsampa Keyboard homepage at <http://tsampa.org/tibetan/software/tsamkey/>. If you have any suggestions regarding Tsampa Keyboard or the license, don't hesitate to contact me at kris@tsampa.org.

III. INSTALLING THE FONT

INSTALLING ON WINDOWS SYSTEMS

Go to the Font folder (*Control Panel* → *Fonts*) and select *Install New Font* from the File menu. Then locate the directory that holds the Tsampa Keyboard font file TSAMKEY.TTF and select it. In case you have any programs running you might have to restart them to get the font to appear in their font selection. If you have any problems refer to Windows help (usually available from the Start menu). If you still can't get the thing installed, don't hesitate to contact me at kris@tsampa.org.

INSTALLING ON LINUX SYSTEMS

Using True Type fonts on Linux is becoming easier and easier. A good place to start is <http://www.xfree86.org/current/fonts.html>.

INSTALLING ON MACINTOSH SYSTEMS

In July 2005, Simon Wickham-Smith (<http://www.qamutiik.net/>), a fellow tibetanist and font designer, kindly converted the font for the Macintosh and bundled it with the documentation. The Mac version has the anusvara mapped onto all single quote signs, but is otherwise identical to the Windows/Linux version. To install the font, you need to decode the package and drag the .sit font file into the Systems folder.

INSTALLING ON OTHER PLATFORMS

Tsampa Keyboard should work on all platforms that support True Type fonts. If you get the font to work on other platforms than the ones listed above, I would appreciate it if you could send me a description of how you did it for possible inclusion into this manual. Screenshots would also be fun.

IV. USING THE FONT IN WORDPROCESSORS

Some wordprocessors have autocorrection features for correcting improper use of capitals, spelling mistakes etc. While useful for typing English, they can really mess up what you type with Tsampa Keyboard and should be turned off. In both Word and WordPerfect they are found under the *Tools* main menu under *AutoCorrect* and *QuickCorrect* respectively.

Tsampa Keyboard might also not display correctly in some applications with poor font support, such as Microsoft's WordPad.

V. TYPING STANDARD TIBETAN

ROOT LETTERS AND VOWELS

The keys are mapped as closely as possible to Wylie transliteration; the general principle is that by typing Wylie you should get the corresponding Tibetan letters.

བོད་ཡིག bod.yig

ཡུལ་ yul.

Naturally, only letters that in Wylie correspond to a single key (such as *ka*, *ga*, *ca* and *ja*) can be mapped straight to the keyboard. To learn to type fluently you will need to learn the mapping of the eleven Tibetan letters that are represented by two (*kha*, *nga*, *cha*, *nya*, *tha*, *pha*, *tsa*, *dza*, *zha*, *sha*) or three letters (*tsha*) in Wylie. Section VIII of this document contains a full list of all supported glyphs along with their corresponding Wylie transliteration.

འིབ་ Ziv.

གཏིས་ gfis.

Another deviation from Wylie is that the built-in *a chung* in all root letters is skipped in input (*a chung* ། itself is mapped to a, with *a chen* ། occupying A).

ནགས་ ngs. (not nags.)

ཁབ་ qb. (not qab.)

མདའ་ mda. (not mda' .)

ཨ་མ་ A.m. (not a.ma.)

STACKING

All superscribed² or subscribed³ ligatures are produced by typing normal Wylie with the SHIFT key pressed down (i.e. capitalized Wylie). For example, while the key combination རg would produce the

² Also commonly known as head or suprafixed letters.

³ Also commonly known as subjoined or subfixed letters.

rag རག syllable, a capitalized RG outputs the *rga* རག ligature. If the ligature lacks a superscribed letter, the root letter takes the full form (i.e. hold down SHIFT only for the subscribed letters).

རྒྱལ་ RGYl

སྐད་ SKd

ཀྱུ་ kYv.

Subscribed letters pose a special problem, since they can occur at different heights depending on whether the letter they attach to is a high one (such as རམས་) or a tall one (such as ཀྱལ་). Here I have decided to let typographic correctness take precedence over easy input. Instead of having a single version used for all letters, the subscribed letters *ya*, *ra* and *wa* exist in high and low versions, as does the vowel *zhabs kyu* (ཟ).

འ་ b* vs. འ་ gY

ཡ་ b, u vs. ཡ་ g+U

ས་ s- vs. ས་ gW

The input order is always the same as when writing Tibetan properly by hand (i.e. superscribed → root → subscribed → vowel). Although some combinations might be producible by other sequences, please try to adhere to the one laid out in the tables below. If you want to use a converter later on to convert back to Wylie transliteration or into another typeface the input order might be important.

NUMERALS

Tsampa Keyboard font contains the standard Tibetan numerals from 0 to 9 mapped to the equivalent key on the keyboard.

༡༦༠༧ 1607

VI. TIBETANIZED SANSKRIT SUPPORT ཨོ་མཆི་བརྗེ་རྒྱུ།

Tsampa Keyboard contains the building blocks the most basic Tibetanized Sanskrit combinations, including the five reversed letters ཏཱ་ཏྟ་ཏཱ་, the subscribed letters *ha*, *Sha*, *ma* and *a chung*, plus the basic Sanskrit vowels. Even though it might not have been designed with other combinations in mind, it is often possible to create other ligatures (like འི་, འུ་ or འོ་), but bear in mind that most of the myriad of Tibetanized Sanskrit ligatures won't be inputable with this font. If you want to do serious Sanskrit typing, you will need a driver-based font. In theory it could be possible to come closer to such a font by

splitting it up even more (like having to add the “leg” to a *ka* ཀྱ if you are not going to write anything below it), but this would make the mapping more complex and could never provide full support anyhow. Of course, it would be possible to create add-on fonts to support more of these ligatures, but that would defeat the basic purpose of this font, making you responsible for switching between them and requiring several font files.

Note that the Wylie transliteration itself doesn’t say how to transcribe Tibetanized Sanskrit; here the Extended Wylie method as proposed by the University of Virginia⁴ is used. As a side note, I think “xWylie” would be a good abbreviation for Extended Wylie.

VII. LIST OF SUPPORTED GLYPHS WITH INPUT KEYS AND WYLIE⁵

ROOT LETTERS

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
<i>ka</i>	ཀྱ	k	<i>ma</i>	མ	m
<i>kha</i>	ཁྱ	q	<i>tsa</i> ⁶	ཅ	cx
<i>ga</i>	གྱ	g	<i>tsha</i>	ཇ]x
<i>nga</i>	ངྱ	v	<i>dza</i>	ཉ	jx
<i>ca</i>	ཅ	c	<i>wa</i>	མཁ	w
<i>cha</i>	ཅྱ]	<i>zha</i>	ཉྱ	z
<i>ja</i>	ཇྱ	j	<i>za</i>	མ	z
<i>nya</i>	ཉྱ	f	<i>'</i> ⁷	འ	a
<i>ta</i>	ཏྱ	t	<i>ya</i>	ཡ	y
<i>tha</i>	ཏྱ	[<i>ra</i>	ར	r
<i>da</i>	དྱ	d	<i>la</i>	ལ	l
<i>na</i>	ནྱ	n	<i>sha</i>	ཤ	Q
<i>pa</i>	པྱ	p	<i>sa</i>	ས	s
<i>pha</i>	པྱ	\	<i>ha</i>	ཧ	h
<i>ba</i>	བྱ	b	<i>a</i> ⁸	ཨ	A

⁴ See <http://iris.lib.virginia.edu/tibet/tools/ewts.pdf>

⁵ The keys not corresponding to Wylie are highlighted in red to make the anomalies easier to spot. This list should be complete when it comes to standard letters and ligatures, but naturally many non-standard ligatures can be created. If a ligature isn’t on the list, you won’t know whether it is producible with Tsampa Keyboard before you try.

⁶ Note that *tsa*, *tsha* and *dza* consist of *ca*, *tsha* and *ja* respectively with an added *tsa phru*, eg. ཅ་ = ཅ་པཱུ

This “loose” tsa phru can also be used to form uncommon combinations such as ཅ་པཱུ་པཱུ་ and ཅ་པཱུ་པཱུ་.

⁷ In some quarters v is used for *a chung*.

SUPERSCRIBED LETTERS

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
<i>rka</i>		RK	<i>lta</i>		LT
<i>rga</i>		RG	<i>lda</i>		LD
<i>rnga</i>		RV	<i>lpa</i>		LP
<i>rja</i>		RJ	<i>lba</i>		LB
<i>rnya</i> ⁹		rF	<i>lha</i>		LH
<i>rta</i>		RT	<i>ska</i>		SK
<i>rda</i>		RD	<i>sga</i>		SG
<i>rna</i>		RN	<i>snga</i>		SV
<i>rba</i>		RB	<i>snya</i> ¹⁰		sF
<i>rma</i>		RM	<i>sta</i>		ST
<i>rtsa</i>		RCX	<i>sda</i>		SD
<i>rdza</i>		RJX	<i>sna</i>		SN
<i>lka</i>		LK	<i>spa</i>		SP
<i>lga</i>		LG	<i>sba</i>		SB
<i>lnga</i>		LV	<i>sma</i>		SM
<i>lca</i>		LC	<i>stsa</i>		SCX
<i>lja</i>		LJ			

⁸ Some people use x to mark out a *chen*.

⁹ According to Tibetan convention, *rnya* always takes the full form of *ra mgo* (རྩ instead of ར).

¹⁰ Although it would be more consistent to use the *sa mgo* for *snya*, the full *sa* looks better in my opinion. Possible conversion scripts should take both forms into account.

SUBSCRIBED LETTERS

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
<i>kya</i>		kY	<i>zla</i>		z)
<i>khya</i>		q*	<i>rla</i>		r)
<i>gya</i>		gY	<i>sla</i>		s)
<i>pya</i>		p*	<i>kwa</i>		kW
<i>phya</i>		*	<i>khwa</i>		q-
<i>bya</i>		b*	<i>gwa</i>		gW
<i>mya</i>		m*	<i>nywa</i>		fW
<i>kra</i>		k+	<i>dwa</i>		dW
<i>khra</i>		q,	<i>tshwa</i>]x-
<i>gra</i>		g+	<i>zhwa</i>		ZW
<i>tra</i>		t+	<i>zwa</i>		z-
<i>thra</i>		[,	<i>rwa</i>		r-
<i>dra</i>		d+	<i>l+wa</i> ¹¹		l-
<i>pra</i>		p,	<i>shwa</i>		QW
<i>phra</i>		\,	<i>hwa</i>		hW
<i>bra</i>		b,	<i>grwa</i> ¹²		g&
<i>sra</i>		s,	<i>h+pha</i> ¹³		?
<i>hra</i>		h+			
<i>kla</i>		k)			
<i>gla</i>		g)			
<i>bla</i>		b)			

¹¹ Strictly speaking, *l+wa* is Extended Wylie, but is included here since the letter is in colloquial use.

¹² Note that subscribed *ra + wa* has its own sign accessible with the ampersand & key.

¹³ *h+pha* is part of Extended Wylie, but has a strong foothold in colloquial writing at least in Amdo, where it is used in Chinese loanwords to render the /f/ sound. *h+pha* is also seen transliterated as f.

STACKS¹⁴

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
<i>rkya</i>		RKY	<i>smra</i>		SM+
<i>rgya</i>		RGY	<i>skya</i>		SKY
<i>rmya</i>		RMY	<i>sgya</i>		SGY
<i>skra</i>		SK+	<i>spya</i>		SPY
<i>sgra</i>		SG+	<i>sbya</i>		SBY
<i>spra</i>		SP+	<i>smya</i>		SMY
<i>sbra</i>		SB+			

VOWELS

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
<i>i</i>		i	<i>u¹⁵</i>		u
<i>e</i>		e	<i>u¹⁶</i>		U
<i>o</i>		o			

NUMERALS

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
<i>0</i>		0	<i>5</i>		5
<i>1</i>		1	<i>6</i>		6
<i>2</i>		2	<i>7</i>		7
<i>3</i>		3	<i>8</i>		8
<i>4</i>		4	<i>9</i>		9

¹⁴ Sometimes called a folded letter.¹⁵ High *zhabs kyu*.¹⁶ Low *zhabs kyu*.

PUNCTUATION AND OTHER SIGNS

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
@ ¹⁷		@	_ ¹⁸		space
# ¹⁹		#	" ²⁰	"	"
(space) ²¹	.	.	{	{	{
/		/	}	}	}

REVERSED LETTERS

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
Ta		!	Na		\$
Tha ²²		^	Sha		%
Da		`			

STANDARD COMBINATIONS WITH SUBSCRIBED HA²³

Wylie	Tibetan	Keys	Wylie	Tibetan	Keys
g+ha		g_	dz+ha		jx_
d+ha		d_	D+ha		`_
b+ha		b_			

¹⁷ Initial *yig mgo mdun ma*.

¹⁸ White space. See footnote 21.

¹⁹ Closing *yig mgo sgab ma*. Used with the initial form to create

²⁰ Quotation marks are commonly used in modern newspapers and novels, but most Tibetan fonts seem to be lacking them (which would require you to take them from another typeface, which might not be in very close harmony with the Tibetan typeface). In fact, a complete Tibetan font would probably need other standard Western punctuation marks as well.

²¹ For some reason mapping the tsheg to the spacebar didn't work in Windows; both Word and WordPerfect continued to spit out white space. I have not ventured to figure out why this happens and how to possibly fix this issue. Whereas the version of Extended Wylie championed by the University of Virginia uses a space for a *tsheg* and an underscore _ for white space, Tsampa Keyboard uses a dot . for a *tsheg* and the spacebar for white space. This usage follows that of those who use a dot for *tsheg* for transliteration (i.e. *bod.skad.* instead of *bod skad*), a usage I personally happen to like for orthographic reasons (the "a dot is a dot is a dot"-argument), although I would also be the first to agree that this makes for a muddled transliteration if there are more than a few words.

²² Some people capitalize both letters for a reversed letter if the letter is represented by more than one letter in Wylie, giving *THa*, *SHa* etc. instead of *Tha* and *Sha*.

²³ Although this subscribed ha can also be used to form the standard combination *lha*, the general stacking principle calls for the use of the LH combination. Purism aside, feel free to chose the combination you like best. This possibility needs to be taken into account if anyone ever writes a font conversion script.

SUBSCRIBED *SHA* FOR *k+SHA*

Wylie	Tibetan	Keys
<i>k+sha</i>		k;

SUBSCRIBED *MA*

Wylie	Tibetan	Keys
<i>d+ma</i>		d (

SUBSCRIBED *A CHUNG*

Wylie	Tibetan	Keys
<i>swA</i>		s-<

Wylie	Tibetan	Keys
<i>kA</i>		k<

SANSKRIT VOWELS (SHOWN WITH *A CHEN*)²⁴

Wylie	Tibetan	Keys
<i>aM</i>		A'
<i>aM^</i>		A' =
<i>oM</i>		AO'
<i>au</i>		AO
<i>-i</i> ²⁶		AI
<i>ai</i>		AE

Wylie	Tibetan	Keys
<i>aiM</i>		AE'
<i>aeM</i>		Ai'
<i>auM</i>		AO'
<i>-im</i>		AI' ²⁵
<i>aH</i>		A:

²⁴ Not every conceivable combination is shown here. Combinations such the half vowels (ex. *hRi* ཨི)

and the lengthened vowels (ex. *A* ཨྱ) should follow logically.

²⁵ Technically the *anusvara* is on the wrong side, but should be quite legible like this.

²⁶ The University of Virginia's Extended Wylie proposal uses the minus sign to indicate non-standard reversed letters; this is what distinguishes *i* ཨ from *-i* ཨ̣.

VIII. TEXT SAMPLES

BEGINNING OF CHAPTER 18 OF MI RO RTSE SGRUNG

བདེ་སྐྱོད་བཟང་པོ་སྐྱུར་ཡང་དུར་བྱོད་དེར་སོང་ནས་སྐྱུར་ལྟར་ཁྱུར་འོངས་པ་ལ།
 རོ་དངོས་གྲུབ་ཅན་ན་རེ། "ཕྱེ་ན་གཞོན། ལམ་ཐག་རིང་ཞིང་ཉི་མ་ཡང་
 ཚ་བས། ང་ཚོས་སྐྱུང་ཞིག་བཤད་ནས་ཁམས་དྲུངས་པོ་ཞིག་གྱེད་"ཟེར་བ་ལ།
 ཁོའི་བསམ་པར་"བྱོད་ཀྱིས་ང་ལ་མགོ་སྐྱོར་བཏང་ནས་འདུར་རྒྱུག་མང་པོ་བྱས། ད་
 ཐེངས་ཅིས་ཀྱང་ངག་མི་ཤོར་བ་གྱེད་"སྐྱེས་ནས་གོ་ཁུལ་ཙམ་ཡང་མ་བྱས་པར་ཁྱུར་
 འོངས་པར། རོ་དངོས་གྲུབ་ཅན་ན་རེ་"བྱོད་ཀྱིས་བཤད་མི་འདོད་ན་ངས་བཤད་"
 ཟེར་ནས་སྐྱུང་ཞིག་བཤད།

BEGINNING OF THE FOUR MEDICAL TANTRAS (RGYUD BZHI 'I RNAM BSHAD)

༡༡། །ཞོ་སྤྱི་ལྷོ་ཨེ། ལྷོ། །བདུད་ཅི་སྐྱོང་པོ་ཡན་ལག་བརྒྱུད་བ་
 གསང་བ་མན་ངག་གི་རྒྱུད་ཀྱི་འགྲེལ་བ་མཚམས་སུ་བབས་པ་ལས།
 ལྷོ་བའི་རྒྱུད་ཀྱི་རྣམ་བཤད་ལེགས་བཤད་སྐྱུར་བ་མཚོག་ཐོབ་ཅེས་བྱ་བ། ལྷོ་
 མ་དང་ལྷོག་པའི་ལྷོ་ལ་གྲུས་པས་སྤྲུག་འཚོལ་ལོ། །རྒྱན་གྱི་དབང་པོ་མཚན་
 དཔེས་ཡང་དག་སྤྱད། །སྐྱོད་བྱུངས་བཟང་མོས་བརྒྱུད་ཁོའི་སྐྱོ་འཕར་འབྱེད། །
 བྱོད་གསང་བཟང་མོའི་འཛིང་ན་ཤེས་བྱའི་ཚོས།

IX. APPENDIX A: GNU LESSER GENERAL PUBLIC LICENSE

GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999

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[This is the first released version of the Lesser GPL. It also
counts as the successor of the GNU Library Public License, version 2,
hence the version number 2.1.]

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the source code. If you link other code with the library, you must
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relink them with the library after making changes to the library and
recompiling it. And you must show them these terms so they know
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We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

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The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

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Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

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