

# Poor man's cyrillics on a Mac

## T<sub>E</sub>Xing English and Russian

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### abstract

The typesetting in T<sub>E</sub>X of English mixed with Russian is discussed for a Macintosh. Starting from the WNCY-fonts only a few extra control sequences have to be remembered for the keyboarding. The approach is suitable for all machines which have the WNCY-fonts. Email in cyrillics can be handled by forming via pdfT<sub>E</sub>X and sending the .pdf file as attachment in a MIME message.

### keywords

Cyrillics, MIME, Macintosh, PDF(T<sub>E</sub>X)

## Introduction

Что такое? Это, ... посмотрим.

How to typeset in T<sub>E</sub>X English mixed with Russian on a Macintosh, that is the problem.

It is not standard available, and it has become difficult because fonts are treated a bit confusing on a Macintosh.

In the beginning all fonts were bitmaps. Then with Apple Laserwriter PostScript fonts were added, and because of their use for printing they were nicknamed printer fonts. Then Apple in a joint venture with Microsoft started with their TrueType fonts, which are similar to, but different from, PostScript.

Although Adobe's Type Manager allows PostScript fonts to be displayed on a screen, one bitmap is still needed to locate the fonts. Next to that Macintoshes come with TrueType fonts. All-in-all quite confusing. An extra inconvenience is that T<sub>E</sub>X requires TFM (T<sub>E</sub>X Font Metric) files while PostScript fonts have their AFM (Adobe's Font Metric) files (It is true that AFM to TFM tools exist via the editor edmetrics, but it is not trivial to perform the transformation).

So what to do? Ну вот?

I asked friends, but alas all came with partial solutions. For some the bitmap was not there or the PostScript fonts were lacking. Others just provided me with TrueType fonts, accompanied by tools to assist keyboarding. Some were aimed at a WorkPerfect environment. And so on. The confusion for me was too great.

### To whom it may concern

In this note I'm not aiming at a fool-proof solution but just report about my ability to typeset simple cyrillics along with my english texts (of a PrePrinT nature) with anyT<sub>E</sub>X, Allowing me to view and print the result with available drivers with little overhead with respect to keyboarding (the latter not specific to Macintoshes). It worked under T<sub>E</sub>Xtures and CMacT<sub>E</sub>X.

### The public domain WNCY family

When I extended my Powerbook 150 and Classic II (which together with my LaserWriter 4/600 formed a local apple-talk network, just as extra and for free) with a real Power-Mac 5500/275, I also looked into which T<sub>E</sub>X & Co environment would be beneficial for some time to come. I was happily surprised by CMacT<sub>E</sub>X's availability of pdfT<sub>E</sub>X, and MetaFont/Post to name but two tools which interested me of late. However, T<sub>E</sub>Xtures also provided the fonts WNCYB, WNCYI, WNCYR, WNCYSC, WNCYSS, in PostScript, along with bitmaps at 10pt, and apparently the good metric files: I could view them in the menu option 'showfonts,' telling me that a bitmap was available and that they were scalable towards all sizes for a printer, meaning that the PostScript variants and the metric TFM and AFM files were available too. A few finger exercises made me happy.

### Keyboarding

A print of a font table was easily done. I figured out that the keystrokes correspond to the phonetical equivalent of the cyrillic character. The т, pronounced as t, was under the t-key and so on. Only a few characters I had to cope with differently. I chose to handle them by T<sub>E</sub>X control sequences, for example я by \ja, which is implemented as `\def\ja{\char31 }`.

I made the following table for myself which would assist me to remember what key or control sequence corresponds to a certain cyrillic character. The lookup is roman alphabetical and from the cyrillics to the key or command. The right part of the table contains the characters that are not mapped under the 26 characters of our a b c . . .

a	a	э	\e
б	b	ю	\ju
ц	c	ж	\zh
е	e	й	\j
д	d	ё	\jo
ф	f	ь	\s
г	g	ъ	\h
х	h	Э	\E
и	i	Ю	\Ju
ј	j	Ж	\Zh
к	k	Й	\J
л	l	Ё	\Jo
м	m	Б	\S
н	n	Ъ	\H
о	o	№	\No
п	p	Ѓ	+
ч	q		
р	r		
с	s		
т	t		
у	u		
в	v		
щ	w		
ш	x		
ы	y		
з	z		

wncyr10 lookup table

### Stressings

Russian is a difficult language. All problems I know of from Dutch, German, English, French and Spanish, come back in Russian, and that is just the beginning. Like in English one can hardly guess the pronunciation and therefore, for foreigners text takes stressings. This is especially

true in the Easy Readers series. Unfortunately the accent in the WNCY font table is used for different purposes, so I defined the accent within \cy's reign appropriately as an active character.

Undoubtedly, the precise positioning of the stress mark is wrong, but for my purposes it is good enough. My knowledge of Russian is such that I commit more severe offences against the language.

Text with stressings is for example

Ба́ю-Ба́юшки-Ба́ю

with input {\cy B'a\ju-B'a{\ju}xki-Ba'\ju}.

### Acknowledgements

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### Conclusions

It seems that the WNCY group allowed me to typeset by T<sub>E</sub>X simple cyrillics and English mixed on a Macintosh, portable at the expense of that I have to remember a few control sequences to account for characters not available in the roman alphabet. However, it is not the most pleasing font I can think of.

With pdfT<sub>E</sub>X I was able to send my first real Russian-English email: a PDF (Portable Document Format) file, sent by MIME (Multipurpose Internet Mail Exchange).

A fool-proof and richer mixing of cyrillics and roman needs more attention.

My case rests. Have fun, and all the best

До свидáния