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INTRODUCTION

This Uighur on Mac OS X 1.0 is the latest on typing Uighur in Mac OS X as of April 24, 2004. I went at length to type this document in hopes of saving other people the time in finding this stuff out, and possibly pooling information that people have for this project.

There are 3 issues to address when typing Uighur in OS X. One is the font, two is the keyboard (input method), and three is the word processing program. Currently, we have usable fonts (from UighurSoft company in Urumqi) and we have a customizable keyboard, and you can read below about the word processor issues. 99% of the thanks goes to ND for hammering out the keyboard and font issues, which he is still working on. However, right now his priority is going towards another project of writing a program that will convert Nisus Classic documents, typed with the famous/infamous Kashgar font, into OS X Uighur fonts that we are using from UighurSoft. If you are like me, then you would have thought that converting our old Classic files would probably never happen. I for one can't wait to convert all my old stuff and leave the Classic world behind, as Nisus is the last of my Classic apps that I'm using.

If you implement any of the following in your computing, please send an email to me bncfarms@securenym.net, expressing your thanks, feedback, bugs, etc. and I will forward it on to ND. Also, I'm sure it would be nice for ND to hear from you if you are looking forward to trying out the conversion program that he's working on.

THE BOTTOM LINE

Unless you have Adobe InDesign 2.0 ME (middle eastern), right now you "can't" type Uighur in OS X. If someone has found a way, please let me know. I put "can't" in quotes because you can type in Mellel and OpenOffice, and everything works great, but there is an appearance issue with the front "u" that you can read about below in FONTS, specifically *The Glitch* and in the WORD PROCESSING PROGRAMS section. ND is working on fixing this. He'd appreciate your prayers.

ATTACHED FILES

Keyboard Layouts
	UighArb.keylayout
	PC UighArb.keylayout

Fonts
	UASLIYA.TTF
	UNASHIB.TTF

Reference Files
	Mellel U test.pdf
	OpenOffice U test.pdf
	UighurSoft Key Code Table.pdf

FONTS

Fonts are like a computer operating system. For those of us in the Mac world, we are intimately acquainted with compatibility and incompatibility issues, especially while living overseas. As far as fonts are concerned, the road of least trouble is to use Uighur fonts that everyone else in the world is using, or at least the vast majority, which means fonts from UighurSoft. Instead of getting into the specifics of font formats (Unicode, TT, OpenType, etc.), suffice it to say that ND has identified two UighurSoft fonts that work the best in OS X, UASLIYA.TTF and UNASHIB.TTF.

These two fonts are Windows TrueType fonts, as well as Unicode (3.0 version). However, there is a problem when inserting more than one of these fonts into FontBook, where the names change and they don't appear correctly. So you will need to only have one installed at a time. ND will be correcting this problem in the near future with his FontLab software.

The *GLITCH:* There is a glitch when typing in word processors (other than Adobe InDesign ME) that the front "u" changes to a "y" in [Mellel](#) (see the file *Mellel U test.pdf*), and in [OpenOffice](#) the letter after the "u" tries to connect to the "u" (see the file *OpenOffice U test.pdf*). ND has identified that the problem is with is with the UighurSoft fonts. It's most likely from the non-standard Unicode UighurSoft fonts. Currently, the Unicode UighurSoft fonts are 3.0 and the standard is 4.0. UighurSoft has said that they plan this year to make their fonts 4.0, but really who knows when that will happen. I think we need to have people get into their face and request this. I've been there once, but I don't live in Urumqi. If people in Urumqi could go and tell them that we need their fonts in the standard 4.0, I think this will move them along. The squeaky wheel gets the grease.

The good news is that Mellel is willing to work with ND on helping to fix the *glitch* so the fonts will work with Mellel. ND is following up on this.

KEYBOARD

For those who don't know, when I say, "keyboard" I'm referring to the input method as indicated by the little American flag on the top menu bar on your screen. ND took one of the Arabic keyboards and modified it to follow a similar

layout to the one most people used in Classic, which was called *ArQwertyNew* had the icon of the man riding a donkey.

I've attached two keyboards, *UighArb* and *PC UighArb*. The *UighArb* is ND's keyboard, and the *PC UighArb* is the same layout that Uighurs use on their Windows PC machines with the Al Katip software from UighurSoft.

I modified the *UighArb* keyboard so that our language tutors could use our computer to transcribe the recordings they have been getting for us. It's been difficult finding a shop that will rent time on one of their computers for our language tutors, so the keyboard enables them to do it on ours, and they don't have to learn a new keyboard layout. It took all but 30 minutes to figure out how to modify the keyboard from ND's email. However, I've now written step-by-step instructions below for anyone to make whatever keyboard layout they would like for use on their computer. So it should only take you a couple minutes to make your own.

I'm waiting to hear back from ND for how to ascribe an icon to the keyboard layout. When I learn how to do this, I'll send it out with the next *Uighur on X*, 2.0. Currently, both *UighArb* and *PC UighArb* have the same icon that looks like a little keyboard.

WORD PROCESSING PROGRAMS

Here is the list of programs that I've tested or researched:

1) Mellel: A shareware for $30. It's a great little multilingual word processor. Typing Uighur with Mellel is fully functional, however the glitch mentioned above of the front "u" changing to a "y" occurs. See the file *Mellel U test.pdf.*

2) Microsoft Office V. X: Microsoft Corp. (monopoly) chose not to include in Office V. X the right to left scripting.

3) Microsoft Office 2004: This will be released in the "first half of 2004". While this version will be fully Unicode compliant, which v. X wasn't, it will not have right-to-left scripting capability.

4) NisusWriter Express: I only saw ND test this last Feb., and it didn't connect the letters. I've also emailed with Nisus and they say that they are waiting for Mac's OS to make changes before they will have full right to left scripting.

5) OpenOffice 1.1: OpenOffice is *open source* software. Everything works great accept one thing. The letters that follow the front "u" have a little tag that tries to connect to the "u" but not totally. If you look at the *OpenOffice U test.pdf* file, you'll see what I mean. I hope that this is related to the font *glitch* mentioned above. If so, then once the *glitch* is fixed, OpenOffice would be a great way to type U because for one it's free, and two you can save files as Windows Office files, and three you can make Excel and

PowerPoint files in addition to Word if you want all in Uighur. Windows with Al Katip can't even do that!

Another nice thing about OpenOffice is that you can add as many Uighur TrueType fonts you like into the OpenOffice fonts folder, and it handles them fine.

6) TextEdit (included in OS X): Lettering does not correctly join, so all you see are final forms (glyphs) of each letter.

7) WorldText (included in the Developer Tools CD): Same results as TextEdit.

INSTALLING FONTS

Follow these instructions for installing fonts in OS X. Open *Mac Help*, type "install font", and hit return to read how to install fonts on your computer. Remember that you will only be able one UighurSoft font installed at a time for it to work correctly. You can go ahead and install more than one and then find exactly what I'm talking about.

INSTALLING KEYBOARDS

The steps for installing the UighArb.keylayout and PC UighArb.keylayout files are:
1) Drag the file(s) into the following folder
   HD>Library>Keyboard Layouts
2) Make sure that there is a plus sign as you are dragging the file, to indicate that the file is being *copied* and not *moved*, so that you can keep a copy of the original.
3) Restart your computer
4) Go to International Preferences in System Preferences window.
5) Click on the Input Method tab
6) Check the box next to UighArb and/or PC UighArb, or whatever keyboard you just installed in order to activate it.
7) When you want to type in a word processor, make sure to select the new keyboard under the American flat that's on the top menu bar, and also select the Uighur font you installed.

MODIFYING KEYBOARDS FOR YOUR LIKING

After trying ND's UighArb keyboard, if you don't like it, then you can change the keys on your keyboard that correspond to Uighur letters. It may seem confusing, but it's actually quite simple. Here are the steps, but make sure to edit with care:

1) Print out the *UighurSoft Key Code Table.pdf* file. You will need this for reference while modifying the file
2) Duplicate (make a copy) the UighArb file.
3) Rename the new file to whatever you like. Make sure that the file name ends with .keylayout, i.e., "My Uighur.keylayout"
4) Open the new file in TextEdit, in this case My Uighur.keylayout.
5) Each new keyboard needs a new ID and name, which can be modified in the third line.

The third line looks like this:

<keyboard group="126" id="-17921" name="UighArb" maxout="3">

Change 17921 to a number between 17923 and 17950

Change UighArb to the new name, in this case My Uighur. Do not remove any of the quotation marks, dashes, etc.

6) Scroll down to indexes 6 & 7:

<keyMap index="6">   This section refers to typing the keyboard without shift, option, etc.

and other section is

<keyMap index="7">   This section refers to hitting Shift and the key.

7) Let's look at the *UighurSoft Key Code Table.pdf* file to know what it means.

    a. What is the first column on the left?
        i. Answer: number-names ascribed for each of the physical keys on your physical keyboard, i.e., it's a map of the physical keyboard
    b. What's the second column?
        i. Answer: the letters, numbers, and marks that you see on your physical keyboard.
    c. What are the 3rd and 4th columns?
        i. Answer: Unicode number for the corresponding Uighur letter

8) Let's do an example to explain how to modify the keyboard:
    a. In ND's keyboard (UighArb) the Shift+N is a non-Uighur letter, and the "V" key is the Uighur "ng" letter. Let's say that I would rather have the Uighur "ng" letter in the Shift+N key position than in the "V" key position. Here's what I would do:

        i. Leave the "V" key alone. There is no need to change it, unless I would want it to represent a different Uighur letter than "ng". I just ignore this key.

        ii. Scroll to <keyMap index="7"> in the My Uighur.keylayout file, since this section represents Shift+key strokes, and I want the Uighur "ng" to be Shift+N.

        iii. Looking at the QWERTY letter column in the *UighurSoft Key Code Table.pdf* file, I find "V". Then I see that the key code for "V" in the first column is 9.

        iv. Now I look at <keyMap index="7"> in the My Uighur.keylayout file, and look for key code 9, which looks like this:

<key code="9" output="ء" />

v. I want change the Asliya Unicode from 0621 to the Asliya Unicode that corresponds to the "ng" Uighur letter.

vi. I look back at the *UighurSoft Key Code Table.pdf* file, and look for the "ng" Uighur letter to find its corresponding Asliya Unicode number. It's 062b.

vii. I go back to <key code="9" output="ء" /> in the My Uighur.keylayout file and replace the 0621 with 062b

viii. Now the Uighur "ng" letter is ascribed to the Shift+N key.

ix. I then save My Uighur.keyboard. (Make sure that .txt is not attached to the end of the file when saving. If a dialogue box comes up asking you if you want to put .txt on the end, click NO.)

x. Finally, I would then follow the instructions "INSTALLING KEYBOARDS" above to install My Uighur.keylayout that I just made.

OPEN SOURCE

For those not familiar with Linux, there is a whole world of free software, called *open source*, made by independent programmers, who use Linux. Since Mac OS X is Unix based like Linux, you can run any open source program in OS X. Running them is a lot like running apps in Classic because you need to use X11 to run them. There is a group of people that have joined together, called Fink (fink.sourceforge.net) to port open source software for OS X, i.e. making downloading and installing open source just like regular OS X software.

If fixing the font *glitch* also fixes the appearance issue in OpenOffice, then I will write an easy installation instruction for OpenOffice and how to enable it for Uighur. Thanks goes to Arlo Kipfer for helping me learn about the world of open source and how to use it in OS X.

HOW YOU CAN HELP

1) Go to the UighurSoft office located in the computer plaza in Urumqi, and ask them when the fonts will be Unicode standard 4.0. Also, tell them how much you and a lot of others need them to be the 4.0 standard.

2) Give me feedback of any kind related to this project.

3) Send thanks to ND and pray that he can finish it soon.

4) Tell people, who use Mac and would like to type in Uighur, to email me if they want me to keep them up to date with this project.

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