

Syllabics and Computers FAQ:

(with thanks to Radu Luchianov)

❖ Which Cree fonts should I use?

--> This depends on the computer and operating system you are using. The best choice is Unicode, but not everyone has equipment and software that will support Unicode. The following chart should help you decide.

Computer	Operating System	Application Software	Cree Font	Entry Method (Keyboard)	"Package"
Macintosh	OS 8 or 9	MS Word, Netscape Navigator, Internet Explorer	East Cree BMac (8-bit)	SILKey and Cree McANSII	McCree2
Macintosh	OS X (10.2)	TextEdit, Mail, Create, OmniWeb, (see note 1)	BJCree UNI (Unicode)	XML Keyboard Definition File (see note 1)	<i>under construction</i> (see note 1)
Intel/AMD PC/IBM	Windows 3.1	MS Word, Shoebox, Paratext, other 8-bit programs	BJECree (8-bit)	Keyman 3.2 and BJCree (east) or Creebrd	CreeKeys (see note 2)
Intel/AMD PC/IBM	Windows 95-98	MS Word, Netscape Navigator, Internet Explorer, Shoebox, Paratext, and other 8-bit programs	BJECree (8-bit)	Keyman 5.0 and BJCree (east) or Creebrd	CreeKeysLT
Intel/AMD PC/IBM	Windows 2000-XP	Shoebox, Paratext, Internet Explorer, Outlook Express 5, & other 8-bit programs (note 4)	BJECree (8-bit)	Keyman 5.0 and BJCree (east) or Creebrd	CreeKeysLT (see note 3)
Intel/AMD PC/IBM	Windows 2000-XP	MS Word, Netscape Navigator, Internet Explorer 6, Outlook Express 6	BJCree UNI (Unicode)	Keyman 5.0 and BJCreeUNI (east) or CreebrdUNI	CreeKeysPRO (see note 3)

Notes:

1. As of this writing, there is good news developing for users who need an input method for syllabics on Mac OS X: Mac OS X 10.2 adds the ability to install a new keyboard layout by putting a file or bundle in a standard folder. It is also now possible to define a Unicode keyboard via an XML text file. We will be exploring this and if it works it will be the recommended method of keyboarding syllabics on a Mac.

If you must use an older Mac and you need to *input* Cree syllabics, you can install McCree2. It is also possible to convert Cree texts in order to view these texts on Mac OS X. This would be the preferred encoding for archiving and Internet use in any case. Mac OS X can use BJCree UNI and other Unicode syllabic fonts natively: The same TrueType Unicode font file that is used on Windows PCs can also be used on Mac OS X, and (once we figure out how) Mac OS X 10.2 "Jaguar" will allow you to keyboard directly into Cree syllabics in Unicode.

2. There is no CreeKeys "package" for Windows 3.1. Instead, you have to install and configure Keyman 3.2, the font files, the keyboard layout, and the shortcuts "by hand". There are detailed instructions, but it is not for beginning computer users. Maybe you can get someone to install it for you. Once it is installed, using the font/keyboard is easy.

3. If you have Windows 2000 or XP and Word 97, 2000 or XP you have the maximum flexibility. For Legacy 8-bit programs like Shoebox, Paratext and other text processing software, you can use the 8-bit BJECree font and keyboard.

For Word, Internet Explorer, Outlook Express 6 and other Unicode-aware applications, you can use the Unicode BJCree UNI font and keyboard. CreeKeysPRO comes with utilities that run with Microsoft Word to convert texts between the 8-bit and the Unicode encoding.

4. Worthwhile linguistics software applications are either being re-written to support Unicode, or new applications with similar capabilities are being developed that are Unicode compliant. Notable examples are Paratext 6, a Unicode compliant version of Paratext, and Toolbox 6, a Unicode version of Shoebox, the popular text analysis and lexicography program. These Unicode versions of these programs are expected by the end of 2002.

❖ *How do I install Cree fonts and keyboards to use in my computer?*

--> Each "Package" comes with its own set of instructions. To install CreeKeysLT or CreeKeysPRO, you download the package file from www.creeculture.ca into your computer and double-click on it. Then just read all the screens and click Next... Next... ...Finish... until it is done. Then run the program by clicking on Start - Programs - Tavultesoft - Keyman. Note that in Windows 2000 and XP you need to be logged on with "Administrator privileges" to install programs and fonts anyway. For best results, read the instructions included in the package in a file named CREEKEYS.DOC.

--> To install CreeKeys (for Windows 3.1) it's a little more involved. When you receive the package, find the file named CREEKEY.DOC and print it out. Follow all the steps carefully, or get a 14-year-old to do it for you.

--> To install McCree (for Macintosh OS 8 or 9) it's a little more involved. When you receive the package, find the file named MCREE2.DOC and print it out. Follow all the steps carefully, or get a 14-year-old to do it for you.

❖ *What's 'Unicode?'*

--> In order to address the interchange of texts across platforms, as well as to provide the number of characters required by the languages of the world, a "two-byte" encoding standard called Unicode was developed. This standard provides a discrete computer character code for virtually every character in every language in the world.

One block of the Unicode encoding system was set aside for Canadian Aboriginal Syllabics. This block contains the standard codes for over 600 characters, including Cree, Naskapi, Nunavik, Blackfoot and Carrier. These characters are in the range U+1401 to U+1676 in the Unified Canadian Aboriginal Syllabics (UCAS) block of Unicode version 3.0.

Both Windows and Macintosh operating systems have taken steps in the late 1990s toward implementing Unicode, but unfortunately at the time of this writing (c. 2002) that implementation is not yet complete. It is clear, however, that the industry is moving toward embracing the Unicode standard in the near future. Since many difficulties associated with Legacy encodings can be avoided by using Unicode, users should install and use Unicode syllabics if their equipment and application software can support it.

The only drawback to using the Unicode encoding system for syllabics is that some older systems and software programs do not support it, so material must be converted between Legacy encodings and Unicode.

❖ *What do you mean by 'Legacy' syllabic fonts or encodings?*

--> **Legacy** means 'handed down from the past'. In computer jargon, it refers to technology that was developed in the past, still in use, but has been superseded by more advanced technology. With regard to fonts and encodings, it refers to any computer fonts that have non-standard character encodings. There are many of these that contribute to the confusion and difficulty when attempting to move multi-lingual texts between applications and computer platforms. The BJECree encoding is but one example of many legacy encodings. Because of earlier limitations in the technology, developers were forced to create fonts that replaced some character shapes with other shapes according to the needs of a particular language project. 7-bit and 8-bit syllabic encodings are referred to as 'Legacy' encodings.

❖ *What do you mean by '7-bit' syllabic fonts or encodings?*

--> **7-bit** refers to the characters that are represented (for the most part) by the characters on the keys of a standard typewriter or computer keyboard, including A-Z, a-z and 1-0, along with punctuation and some symbols. The practical limit to the number of characters in a 7-bit character encoding is about 95. (from decimal 033 to 127)

When a 7-bit encoding is used for Cree syllabics, the typewriter keys are made to correspond to syllabic characters. While they can be used without any special keyboard programs, a unique "Cree" keyboard layout must be learned in order to type these characters. One benefit to this approach is that users across many programs and platforms are able to share texts, even over the Internet, provided that a font with a matching encoding is used on each computer. It is possible to design a 7-bit font that works on both platforms, but it pushes the limit of the character inventory.

Some drawbacks to the 7-bit approach is the limitation on the number of characters in the character set, the necessity of learning a new keyboard layout, and the many different (conflicting or competing) 7-bit encodings in use. We do not recommend using any 7-bit encodings unless you already use your own and like it.

❖ *What do you mean by '8-bit' syllabic fonts or encodings?*

--> **8-bit** refers to the characters that are represented (for the most part) by the characters on the keys of a standard typewriter or computer keyboard, including A-Z, a-z and 1-0, along with a standard set of "accented" and symbol characters. The practical limit to the number of characters in an 8-bit character encoding is about 122. However, in practice 8-bit encodings tend to leave the 7-bit characters (A-Z, a-z etc.) as they are and only re-assign decimal 128 to 255 to syllabics.

The obvious benefit to this approach is that standard alpha-numeric (English) characters are available in the same font as syllabic characters: English words can be incorporated in Cree texts without changing fonts. However a keyboarding program must be used in order to conveniently access the syllabic characters in such a font. Such programs have been in use for some time, two important ones being Tavultesoft Keyman for Windows and SILKey for Macintosh. By implementing such programs, custom keyboard layouts of any configuration may be used, even multiple keyboard layouts for the same encoding.

Some drawbacks to the 8-bit approach is still the limitation on the number of characters in the character set, application software and printer drivers interpreting certain characters differently, the incompatible encoding standards of Macintosh and Windows, and the different (conflicting or competing) 8-bit encodings in use. Alas, with 8-bit legacy fonts Mac and Windows must use different encoding schemes.

❖ *How do I convert texts from one encoding to another?*

--> There are several methods of converting encodings: Consistent Change programs and tables, Visual Basic programs and Perl scripts have all been written to do the job. To know what is right for your situation, several factors must be taken into consideration, including formatting, operating system(s) involved and application software used. The more things that are "alike" the better. See *How do I convert syllabics between Windows and Macintosh?* and *Converting Legacy encoded texts to Unicode*.

❖ *How do I convert syllabics between Windows and Macintosh?*

--> Several ways have been tried. The most reliable is to use Unicode as the "transfer" encoding. These instructions are only for BJECree (for Windows) and McCree (for Macintosh). If you use some other fonts, you need to follow more steps. See "Other kinds of syllabic fonts". You also need a program that runs on the Mac (along with MS Word for Mac) and a program that runs on the Windows computer (along with MS Word for Windows).

If you download CreeKeysPRO, you get some utilities to go half-way. Look for the file named "Cree Unicode VBA Template-PC". Read it, follow the instructions to install it. With it, you can convert the 8-bit BJECree (for Windows) to Unicode BJCree UNI.

You then copy the Unicode file to the Mac. If you have Mac OS X, (10.2 “Jaguar”) then you are done. (see “*Which Cree fonts should I use?*” for Mac OS X)

If you use Mac OS 8 or 9, you need to convert the Unicode file to McCree2 using the “Cree Unicode VBA Template-Mac”. Read it, follow the instructions to install it. With it, you can convert the Unicode BJCree UNI to 8-bit East Cree BJMac (for Macintosh).

❖ *How do I convert syllabics from Macintosh to Windows?*

--> You have a Macintosh text in McCree (8-bit East Cree BJMac) and you want to use it in Windows. There is a utility called “McCree Roman VBA Template” that runs on the Windows PC to do this. You need to save the file in Word on the Mac, copy the file to the Windows PC and open it in Word. Use the utility in “McCree Roman VBA Template” running on the Windows PC to either convert to BJCree or to Roman spelling. Under “Tools” use the menu item under “Cree Syllabics Text Tools.”

❖ *How do I convert syllabics to Roman spelling, or from Roman spelling to Syllabics?*

--> You do this on a Windows PC running MS Word. You need the utility in the “Cree Roman VBA Template” which is found in CreeKeysPRO. Copy this template to your Word “Startup” folder, and then open your file in Word. Under “Tools” use the menu item under “Cree Syllabics Text Tools.” Syllabics are converted to Roman formatted in “Courier New” font. Roman (in “Courier New” font) can be converted to syllabics.

--> If your text is on a Mac, first convert it to Windows (see *How do I convert syllabics between Macintosh and Windows?*). If you can do this, you already have the utility you need to do the conversion, in “McCree Roman VBA Template”.

❖ *Sometimes when I work with tables in MSWord, I cannot see the dots in the syllabics, but when I print the document they are there.*

--> Use the magnifying feature in the standard toolbar. At 150% you should see all the dots that are there. Or, use a larger font size.

❖ *Why do other syllabics characters appear between words that I did not type?*

--> You probably have the “Reveal Formatting” to show formatting marks, such as paragraph marks and tabs feature turned on. This feature is not compatible with (Legacy) Cree syllabics. Unclick the ¶ button on the toolbar (shortcut key CTRL + *),

Or click on Tools-Options-View menu; unclick all the check marks under “Formatting”.

Really want to know *why*? The BJCree (Legacy) encoding uses the “paragraph mark” character and other “symbol” characters for syllabic characters instead. When you reveal these characters, you get the syllabic character that was assigned to that code instead. This problem goes away if you can use Unicode.

❖ *I type the right characters in syllabics, the syllabic characters mysteriously change to something else as I type.*

--> Click on Tools-AutoCorrect, select the “AutoFormat as you type” tab, and deselect everything. Also select the “AutoCorrect” tab, and deselect everything there too. These features corrupt (Legacy) Cree syllabics typing and should never be left on.

Really want to know *why*? The BJCree (Legacy) encoding uses upper and lower case accented characters for syllabic characters instead. The AutoCorrect and AutoFormat options try to correct your “capitalization”, and changes the syllabic characters unexpectedly. This problem goes away if you can use Unicode.

❖ *I try to type in syllabics, but I get weird characters instead, like ũÁµç□¶.*

--> You need to use the right syllabic font. Click on Format-Font, and choose **BJECree**. You have the BJECree (East) keyboard on and you also need to be using the BJECree font.

Really want to know *why*? The BJECree (Legacy) encoding uses accented characters and symbol characters for syllabic characters instead. Your keyboard is giving you the right characters, but you have the wrong font selected. You need both the Cree font and Cree keyboard to type in Cree.

❖ *I try to type in syllabics, but I get the Cree word spelled in Roman characters instead, like **masinaahikin** . (See also *Unicode Questions*)*

--> Click on the “Tavultesoft Keyman” icon down on the lower right-hand corner of the screen, and choose BJECree (east). You may have the BJECree font selected, but not the appropriate keyboard. You need both the Cree font and Cree keyboard to type in Cree.

Really want to know *why*? The BJECree (Legacy) encoding retains all the plain English characters along with the syllabic characters.

❖ *Converting Legacy encoded texts to Unicode.*

--> You do this on a Windows PC running MS Word. You need the utility in the “Cree Unicode VBA Template” which is found in CreeKeysPRO. Copy this template to your Word “Startup” folder, and then open your file in Word. Under “Tools” use the menu item under “Cree - Unicode”. Syllabics are converted to Unicode and formatted in the “BJCree UNI” font. Unicode can also be converted back to the 8-bit BJECree “Legacy” encoding.

--> If your text is on a Mac, first convert it to Windows (see *How do I convert syllabics between Macintosh and Windows?*). To do this you need “McCree Roman VBA Template”.

❖ *I want to put Cree on the Internet, what do I do?*

--> Unicode is the most reliable way to display syllabics on the Web. You can use any method to produce the Cree text, depending on what you have available (see *Which Cree fonts should I use?*) and then you can convert the text to Unicode before pasting it into your Web editing tool. (see *Converting Legacy encoded texts to Unicode*). You will need a Web page designing program that is Unicode aware, like MS Front Page or OmniWeb. You must also save your html files as (Unicode) UTF-8, and set your browser to (Unicode) UTF-8 encoding or character coding.

❖ *I want to browse a web page that has Unicode Cree syllabics, but they do not show up on my screen.*

--> First make sure that your Operating System is Unicode compatible (see table above), and that your browser is (see table below). Then make sure that you have downloaded and installed the Unicode Cree font you want to see. To do the latter, go to eastcree.org or the creeculture.ca web sites where the fonts can be downloaded.

❖ *Why can't I use a Legacy encoding on the Web?*

--> You can, but it is perilous. First of all, most of the Legacy encodings out there have one or two characters that is “illegal” in certain important applications. The CreeKeys font, 8-bit BJECree, as currently distributed, has a problem with the /maa/ character, at decimal d173, the character code for “discretionary hyphen”. In many applications, this character is a “zero-width” character so it does not show. A new 8-bit BJECree font has been developed with /maa/ re-encoded to another character code, and it works. However, to re-deploy the “new” BJECree font is a major undertaking, because everybody would have to do it for all the documents they have in the old font.

The 8-bit East Cree BJMac font for Macintosh in the “McCree” package also has several drawbacks, notably the “illegal” Mac character code at d202 for the /taa/ character. A new edition of this font has also been produced for a work-around, but we face the same re-deployment difficulties.

Even with the improved fonts, any text published to the Web would have to use some software strategy to “convert” the encoding Cree texts “on the fly” for the different client computers, Mac or Windows. Or different versions of each web page have to be deployed for each OS.

--> 7-bit Legacy fonts have been used with some success to put syllabics on the web, notably for some Inuktitut language sites (see *What do you mean by ‘7-bit’ syllabic fonts or encodings?*) but for most Cree language sites a larger inventory of syllabics is required, and a strictly “7-bit” approach can seldom be maintained: Certain character codes must also be used from the 8-bit range. Also, users of this approach are switching to Unicode.

❖ *Can I send and receive E-mail in syllabics?*

--> You can. As usual, Unicode is the best approach. But you need a Unicode-aware e-mail client running on Windows 2000 or XP. As of this writing, Outlook 2000 or 2002 works, also Outlook Express 6, and Opera 6. You install CreeKeysPRO, use the BJCree UNI keyboard. Remember both the sender and receiver each need a Unicode compliant installation.

--> You can also use a Legacy (8-bit or 7-bit), but it is perilous. See the problems listed under *Why can't I use a Legacy encoding on the Web?*

❖ *Can I “chat” using instant messaging in syllabics?*

--> You can. As usual, Unicode is the best approach. But you need a Unicode-aware messaging client running on Windows 2000 or XP. As of this writing, Windows Messenger and Microsoft Chat work, others may as well. We have not tried AOL or others. Remember both the sender and receiver each need a Unicode compliant installation.

--> You can also use a Legacy (8-bit or 7-bit), but it is perilous. See the problems listed under *Why can't I use a Legacy encoding on the Web?* Depending on the sender and receiver setup, however (if both use identical setups that work) then it is workable.

❖ *What about other syllabic fonts and encodings?*

--> There must be dozens of “Legacy” syllabic fonts out there. It seems that whenever someone needed a font they invented their own way to do it. Even the CreeKeys and McCree Legacy 8-bit fonts are still “hacked” fonts, where existing standardized fonts were forced to do syllabics. These were both based on earlier fonts, so that there would be some backward compatibility. The East Cree School Board used a set of extended 7-bit fonts created by Eiko Emori in the late 1980s and early 90s that were replaced by BJECree, which shared the encoding of SILECree. Conversion programs were written so that the old texts typed on the Eiko Emori fonts could be converted to the BJECree encoding, and later to Unicode.

If you are using any syllabic typing system that is satisfactory to you on your current equipment, there is no need to change. But if you are interested in sharing Cree text files between computers or over the Internet, it is important that your system will handle this. Unicode was written to do this job, and should be considered by any Cree syllabic project that aspires to share texts beyond their own community or organization. Being able to convert texts from older “Legacy” encodings to Unicode (and possibly back again) will permit a transition stage where material may be produced on one kind of computer, and then posted on the Web on another. Seriously considering and implementing Unicode will avoid lots of problems inherent in other encoding systems.

❖ *How do I create a PDF file with Syllabics?*

-->You must use a program called "Adobe Acrobat" (not the Reader, but the Acrobat itself). To ensure everybody can view the syllabics you must **embed** the syllabics font you are using. In Acrobat 5.0 for Windows, go to "File\Print", and select "Acrobat Distiller". Click on "Properties" and select the "Adobe PDF Settings" tab. Unclick: "Do not send fonts to Distiller" and click on "Edit Conversion Settings" and click on the "Fonts" tab. Make sure "embed all fonts" is NOT selected, but select "subset embedded fonts: 100%". In the box below, select your system. You should see the syllabics fonts you are using. Select them and put them in the "always embed" fonts list. Save your settings for next time.

❖ *How can I create web pages with Cree Syllabics that do not require users to download a font?*

-->You can use little pictures of the syllabics, or design them with programs like Macromedia Flash. With Flash 6 you can type either in Unicode or 8 bit using the CreeKeys keyboard. You can see examples of these on the Cree website www.eastcree.org

Cree Font display and typing (with CreeKeys) by software

To be completed...

Software	8bit	Unicode	Mac8bit	MacUnicode
emailers				
Opera6	N(L),Y	Y,Y		
Eudora5.1.1	Y,Y	Y,N	Y, Y	N,N
Outlook(Win2k)	Y,Y	N,Y		
Outlook(WinXP)	Y,Y	Y,Y		
NSMessenger4.5	Y,Y	Y,N		
NSMessenger4.7	Y,Y	Y,N		
NSMessenger6.2	Y,Y	Y,N		
NSMessenger7.0	Y,Y	Y,N		
browsers				
IE4	Y,Y	Y,N		
IE5	N(L),Y	Y,N		
IE5.5	N(L),Y	Y,N		
IE6	N(L),Y	Y,N(Win9x)		
NS3	Y,Y	Y,N		
NS4.5	Y,Y	Y,N		
NS4.7	Y,Y	Y,N		
NS6.2	N(L),Y	Y,N		
NS7.0	Y,Y	Y,N		
Opera6	N(L),Y	Y,N		
Omniweb				Y
text editors				
Wordpad	N(L),Y	Y,Y		
Notepad(Win9x)	Y,Y			
Notepad(Win2k)	Y,Y	Y,Y		
NoteTab Light	N(L),Y	N,N	N/A	N/A
EmEditor3.28	Y,Y	Y,Y	N/A	N/A
BBEdit	N/A	N/A	Y,Y	N(X)
web design				
FrontPage2000	Y,Y	Y,Y	Y	N(X)
FrontPage2002	Y,Y	Y,Y	Y	
DreamweaverMX	Y,Y	Y,N(Paste)	N/A	N/A
GoLive5			N	
Flash	Y,Y	Y,N(Paste)	Y	