MS Word

MS Word Font Issues

1 Introduction

This note describes some issues with fonts in *MS Word* when moving files between different version of *MS Word* and in particular between versions on *MS Windows* and *Mac OS X* — if you don't have time to read this document, just skip to the conclusions and recommendations on page 8 — if you don't even have time to turn the pages: use the font *Ariel Unicode MS* for any mathematical operators you use in your documents you are sending to other people. *DejaVu* fonts are available for all platforms from http://dejavu-fonts.org and have most of the mathematical operators as well as fonts suitable for the text.

1.1 Sample Font Problem

The screen snap from an *MS Word* document viewed using *MS Word 2004 for Mac* in figure 1 shows some missing glyphs with a box □ symbol.

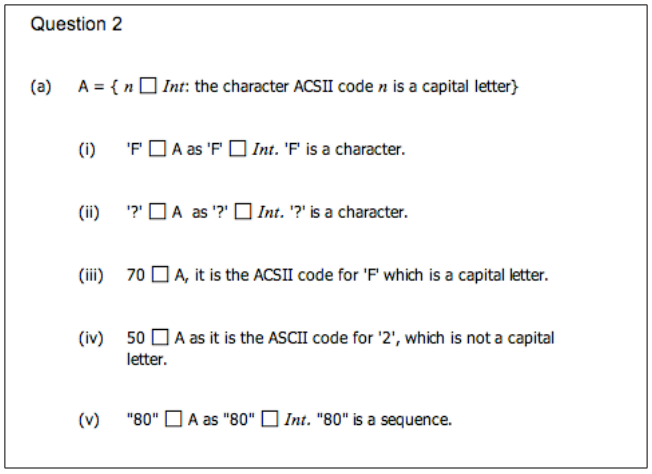

Figure 1: MS Word 2004 Missing Fonts

From *MS Word 2004* menu bar → *Tools* → *Compatibility Report* we get the dialogue box in figure 2

The author of the document had used the following fonts in the original document:

- ArialMT
- CourierNewPSMT
- LucidaSansUnicode
- Tahoma
- Tahoma-Bold
- TimesNewRomanPS-ItalicMT

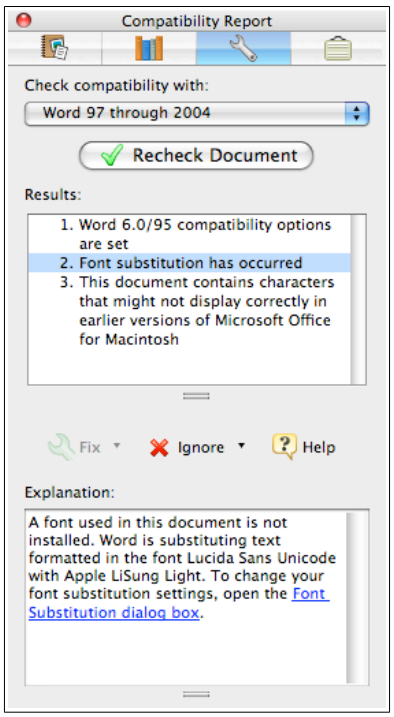

Figure 2: MS Word 2004 Compatibility Report

All the fonts are *TrueType* fonts — fortunately, the author had supplied a PDF version of the document so that the *Adobe Reader Document Properties* dialogue (from *File* → *Properties...*) could be used to give an indication of the fonts and their names (though font substitution may have occurred here too)

The *Font Substitution* dialogue (figure 3 from *Word* menu → *Preferences* item → *Compatibility* item) confirms that the font *Apple LiSung Light* has been substituted for the missing font *Lucida Sans Unicode* — unfortunately, the substituted font does not have the required glyph.

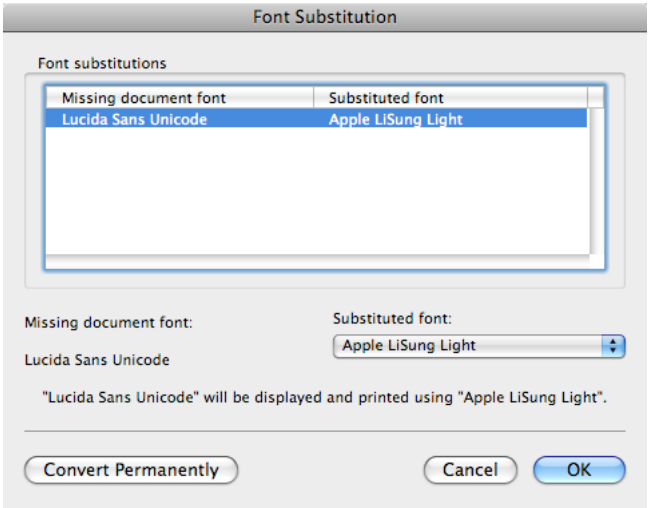

Figure 3: MS Word 2004 Font Substitution Dialogue

In this case, we can see the missing glyphs from the PDF file and use the *Font Substitution* dialogue to change the font to *Ariel Unicode MS* which does have the required glyphs and the document is now displayed in figure 4 — note that this will not look exactly like the original since the exact shape of the glyphs are slightly different (and it could change lines

breaks...). The *default* font substitution is *Lucida Grande* (the Mac system font) but this does not have the required glyphs either.

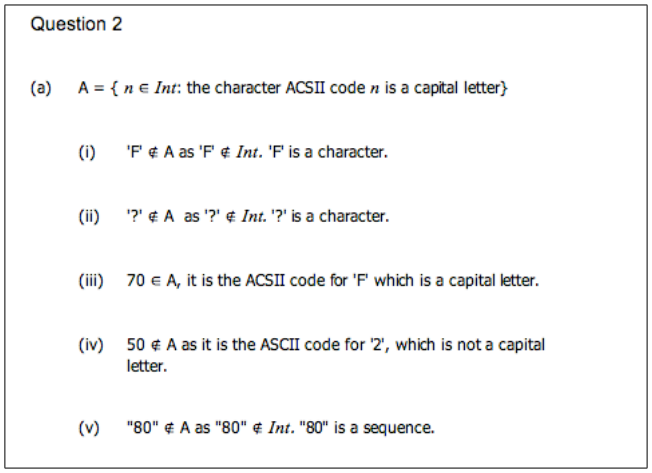

Figure 4: MS Word 2004 Fonts Substituted

2 Font Embedding & Substitution in MS Word 2007

In MS Word (2007 and earlier) for MS Windows, it is possible to embed fonts in a documents — which means recipients do not need to have them installed — however not all fonts can be embedded for both screen and print use — see below on *Font Properties Extension* in section 3.2. *Office button → Word Options → Advanced* gets figure 5

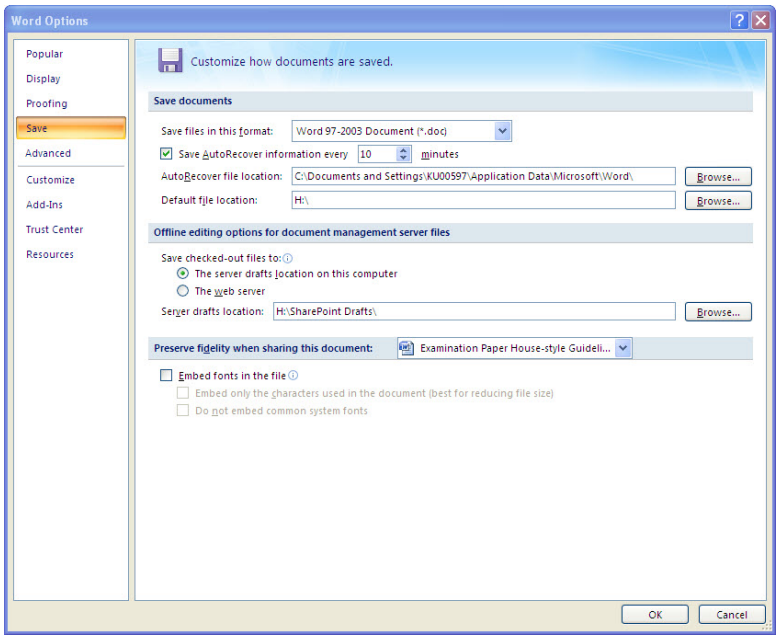

Figure 5: MS Word 2007 Save Options

In *MS Word 2007 Office button → Word Options → Advanced* gets figure 6 — clicking on *Font Substitution...* gets the *Font Substitution* dialogue if fonts have been substituted (otherwise a message box informs you that no substitution was needed)

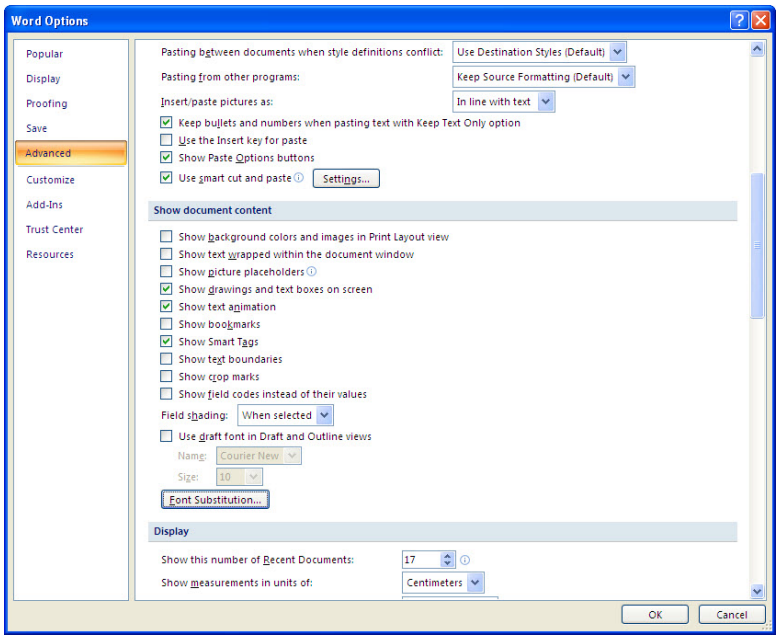

Figure 6: MS Word 2007 Advanced Options

3 Font Tools

The tools we are looking for need to address the following questions — we wish to view the fonts rather than have font creation tools:

1. Which glyphs are in this font ?
2. Which fonts have this particular glyph ?
3. Given a character displayed as not present (□), what character is it ?

We would also like to know which versions of which package or operating system include particular fonts — here are a couple of Web sites that have some information on that:

- http://media.24ways.org/2007/17/fontmatrix.html is the *Font Matrix* table which hangs off a *24 Ways* article for 2007 — a bit out of date but still useful.
- http://www.apaddedcell.com/web-fonts is *Complete Guide to Pre-Installed Fonts in Linux, Mac, and Windows* by Mega McDermott (10 November 2007)

Alan Wood's *Unicode* Web site (http://www.alanwood.net/unicode/) lists lots of utilities — here are some that I have used:

3.1 Font Tools for Mac OS X

3.1.1 UnicodeChecker

From http://earthlingsoft.net/UnicodeChecker/index.html.en — *donation ware*.

Figure 7 shows the main screen.

This will answers questions 2 and 3 on an Apple Mac — this is one of the few tools that will identify the character with the missing glyph. To do this, copy the missing character

(by copying the □ character from MS Word) and paste it into the *UnicodeChecker* character area in the main window (see figure 7)

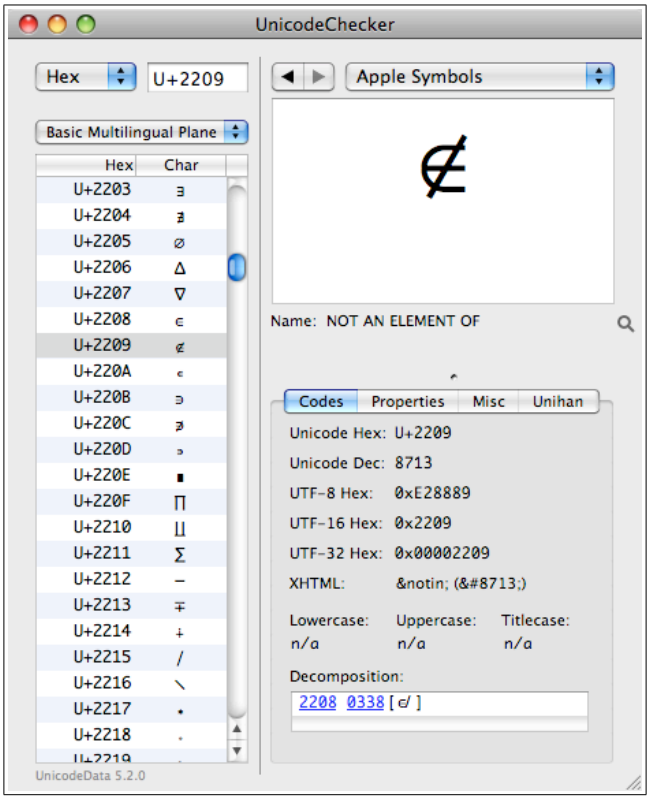

Figure 7: *UnicodeChecker* Main Window

3.1.2 Unicode Font Info

From http://pixel.recoil.org/code/unicodefontinfo/index.html — free.

Figure 8 shows the main screen.

This will answer question 1 on an Apple Mac

3.1.3 Font Book

Comes with *Mac OS X* — answers question 1 but not as conveniently as *Unicode Font Info*

3.2 Font Tools for MS Windows

3.2.1 Microsoft Font Properties Extension

The *Microsoft* web site http://www.microsoft.com/typography/ has lots of useful information (Krieger (2007, page 26) describes this). *Font Properties Extension* can be downloaded from this site — this gives details of embedding permissions (amongst other things). To get the dialogue in figure 9, do a *secondary click* (right click, usually) on a font file in the *Fonts* directory — accessible from the *Control Panel* or as C:\WINDOWS\Fonts

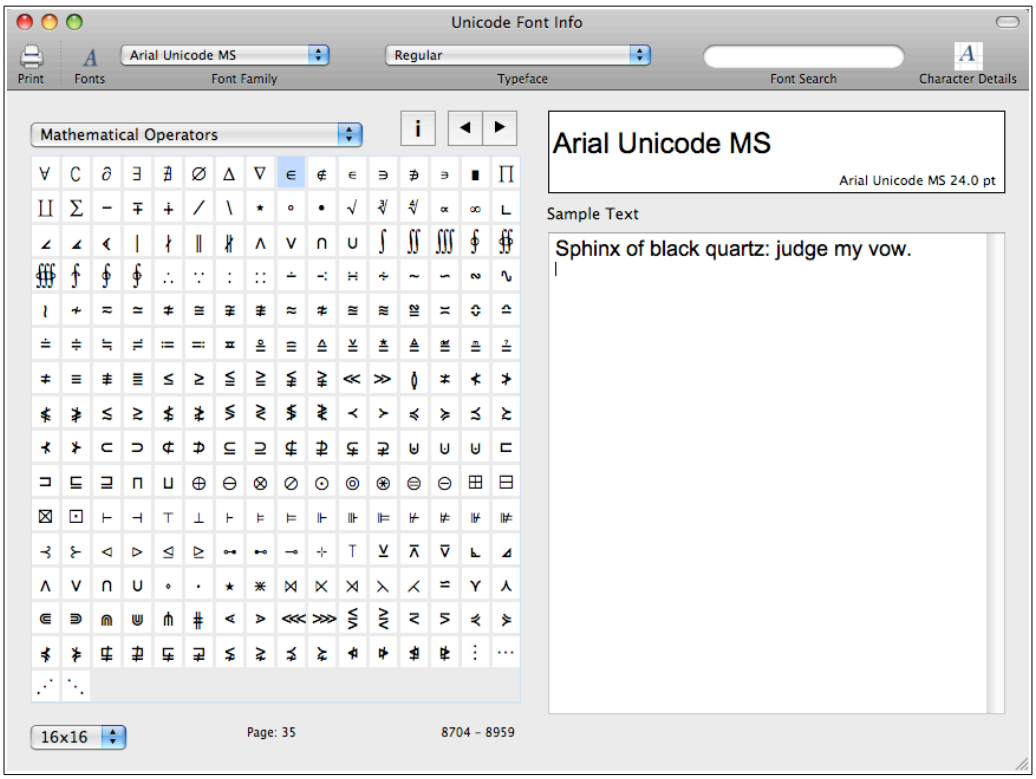

Figure 8: *Unicode Font Info* Main Window

3.2.2 MS Word Insert Symbol Dialogue

The *MS Word Insert Symbol* dialogue (see figure 10) gives access to symbols in a particular font. This dialogue is obtained as follows:

MS Word 2007 *Ribbon* → *Insert* tab → *Symbol* group → *Symbol* contextual tab → *More Symbols...*

MS Word 2003 (& earlier) *Menu bar* → *Insert* → *Symbol...*

MS Word 2004 for Mac (& earlier) *Menu bar* → *Insert* → *Symbol...*

3.2.3 MS Windows Character Map Tool

MS Windows also has a *Character Map* tools to display all the characters in a particular font — this enables characters to be inserted into a document as well as finding which glyphs are in a font. It also gives the *Alt* + numeric keypad digits that may be used to insert the character from the keyboard. (see Karp et al. (2002, page 117) and figure 11).

This is obtained from *Start* → *All Programs* → *Accessories* → *Character Mapper* (sic) or *Start* → *Run...* → `charmap`

3.2.4 Unicode Font Viewer

From `http://www.soft-gems.net` — free — answers question 1 — see figure 12

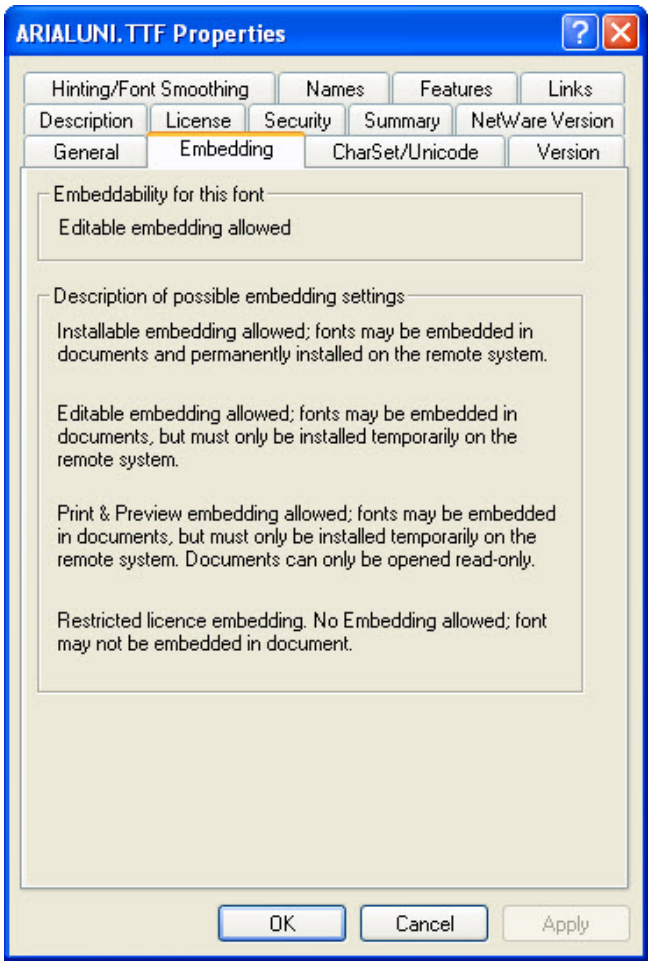

Figure 9: MS Windows XP Font Properties Extension Dialogue

3.2.5 ListFont

From http://heiner-eichmann.de/software/listfont/listfont.htm — free — answers question 1 — see figure 13

3.2.6 AMP Font Viewer

From http://www.ampsoft.net/utilities/FontViewer.php — free — answers question 1 — see figure 14

3.2.7 TrueType Explorer

From Alan Woods web site — free — answers question 1 and gives a lot of detail about the fonts — see figure 15

3.2.8 MainType

From http://www.high-logic.com/maintype.html — £££ — answers question 1

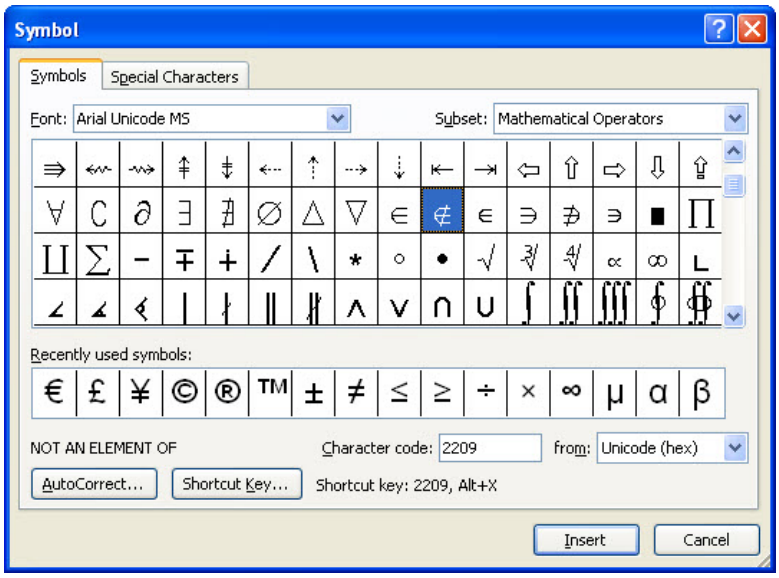

Figure 10: MS Word 2007 Insert Symbol Dialogue

3.2.9 PopChar Win

From http://www.ergonis.com/products/popcharwin/ — £££ — answers questions 1 and 2 — there is also a version for Mac OS X (the program was originally implemented on the Mac platform in OS 9 days but has been ported to both Mac OS X and MS Windows). I liked this program — see figure

4 Conclusions

If you are sharing documents and want both parties to see the same formatting, I suggest:

1. Send the recipient a PDF version of your file — you should both see the same in this both on screen and print.
2. Check whether the fonts you are using for characters beyond the ASCII or Basic Latin character set are available on the recipients platform — the *Basic Latin* character set is described at http://www.alanwood.net/unicode/basic_latin.html or http://en.wikipedia.org/wiki/Ascii or http://en.wikipedia.org/wiki/Basic_Latin — it is the character set covering the usual Western European languages (but not the mathematical operators)
3. *Ariel Unicode MS* is one of the few fonts that has the mathematical operators and exists in versions of MS Word for both MS Windows and Mac.
4. *DejaVu* fonts are available for all platforms from http://dejavu-fonts.org and have most of the mathematical operators as well as fonts suitable for the text. These are not installed by default on MS Windows and Mac OS X but can be downloaded and installed by users.
5. If the sending party is on MS Windows and the recipient does not have the fonts, try embedding the fonts.

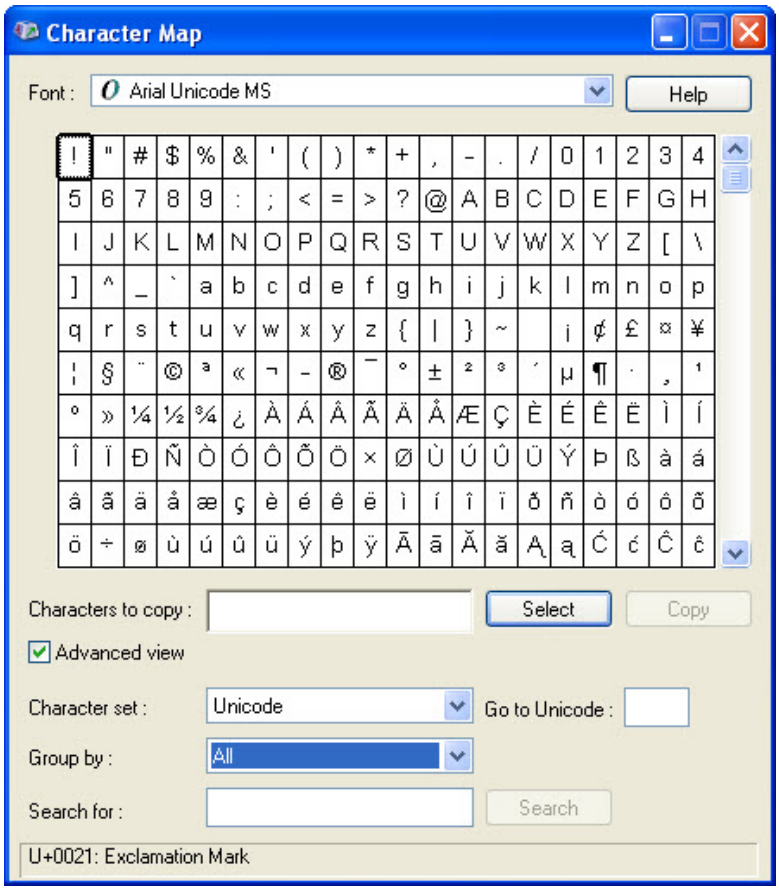

Figure 11: MS Windows XP Character Map Dialogue

References

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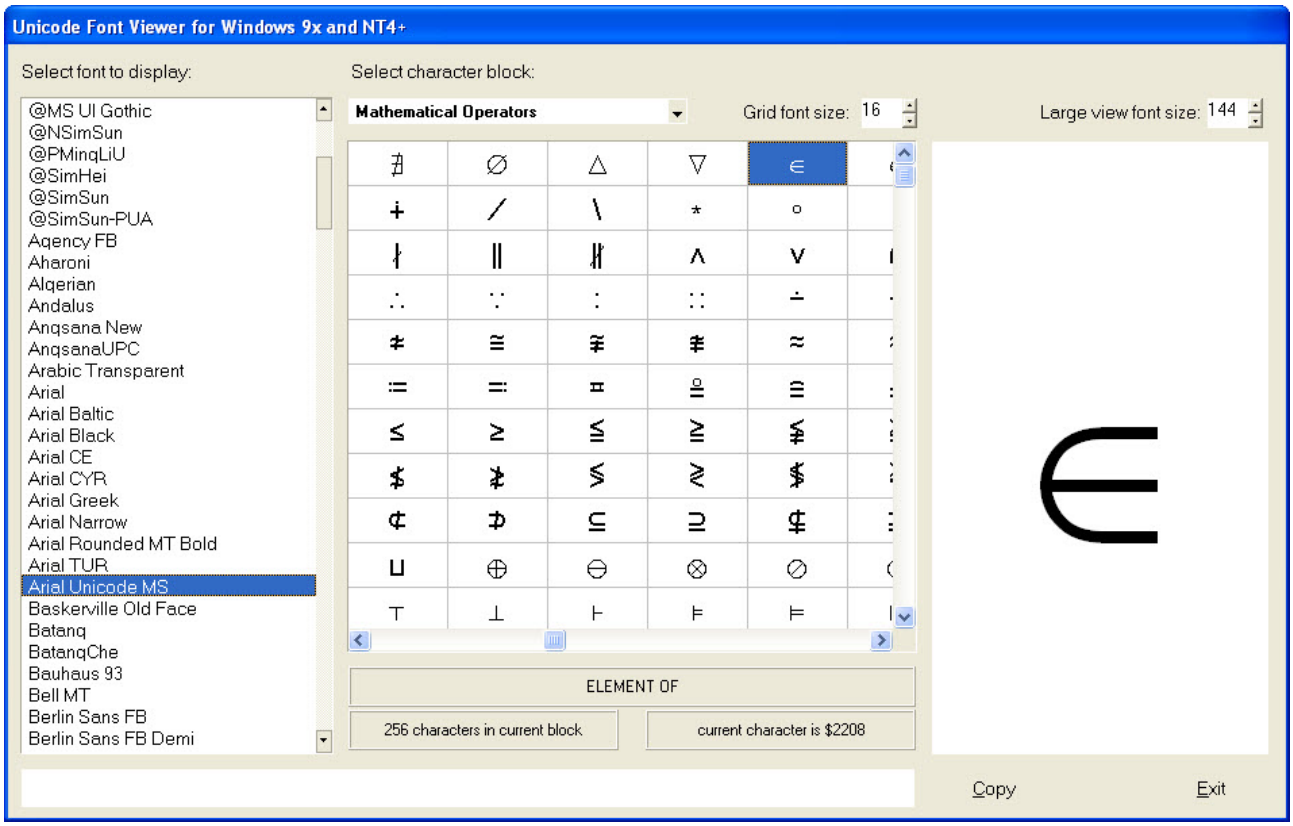

Figure 12: Unicode Font Viewer Dialogue

Author: Phil Molyneux
Written: 8 November 2009, 15 December 2009 *Printed: 15th December 2009*
Source: <baseURL>/Subjects/WordProc/MSWord/Config/wordFontIssues20091107.pdf

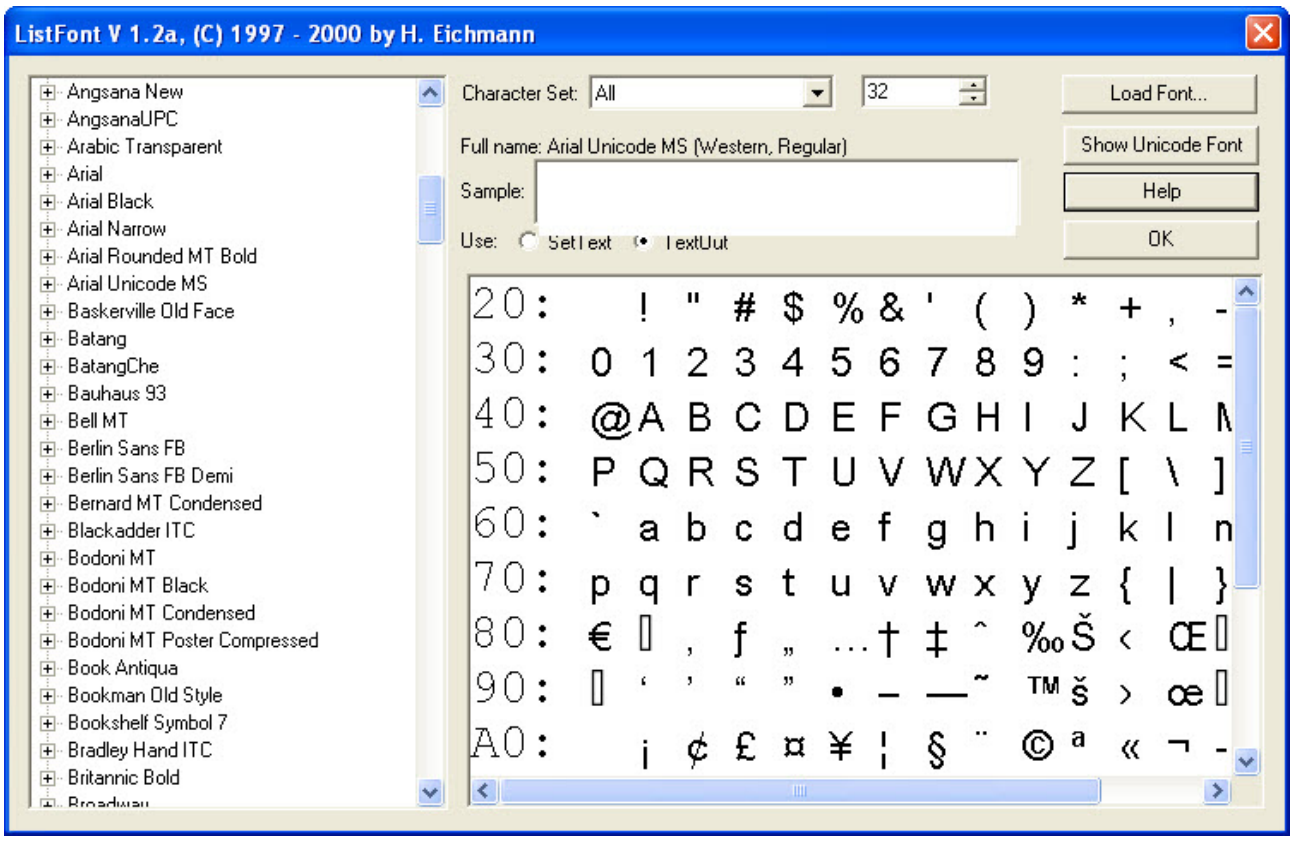

Figure 13: ListFont Dialogue

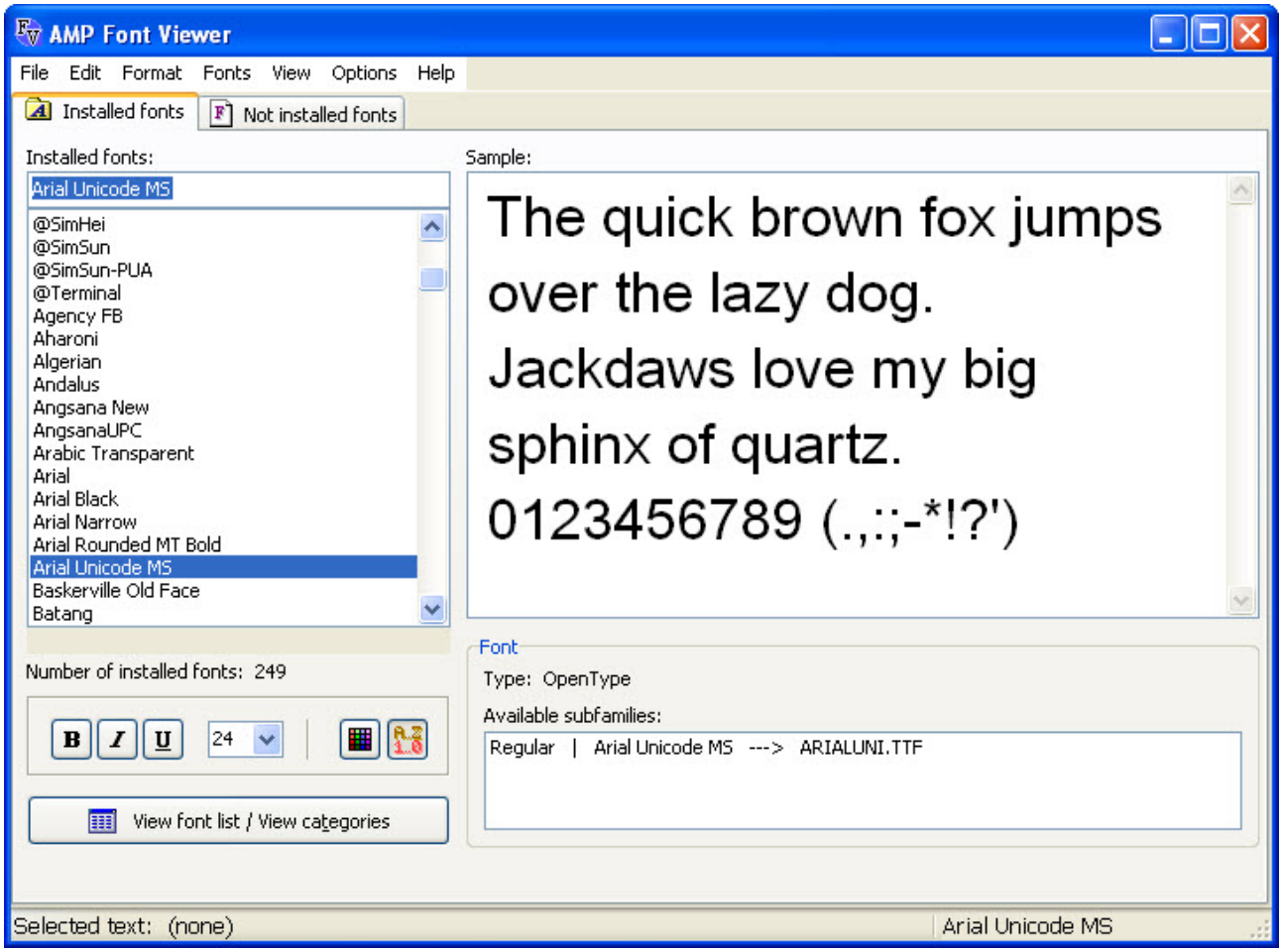

Figure 14: AMP Font Viewer Dialogue

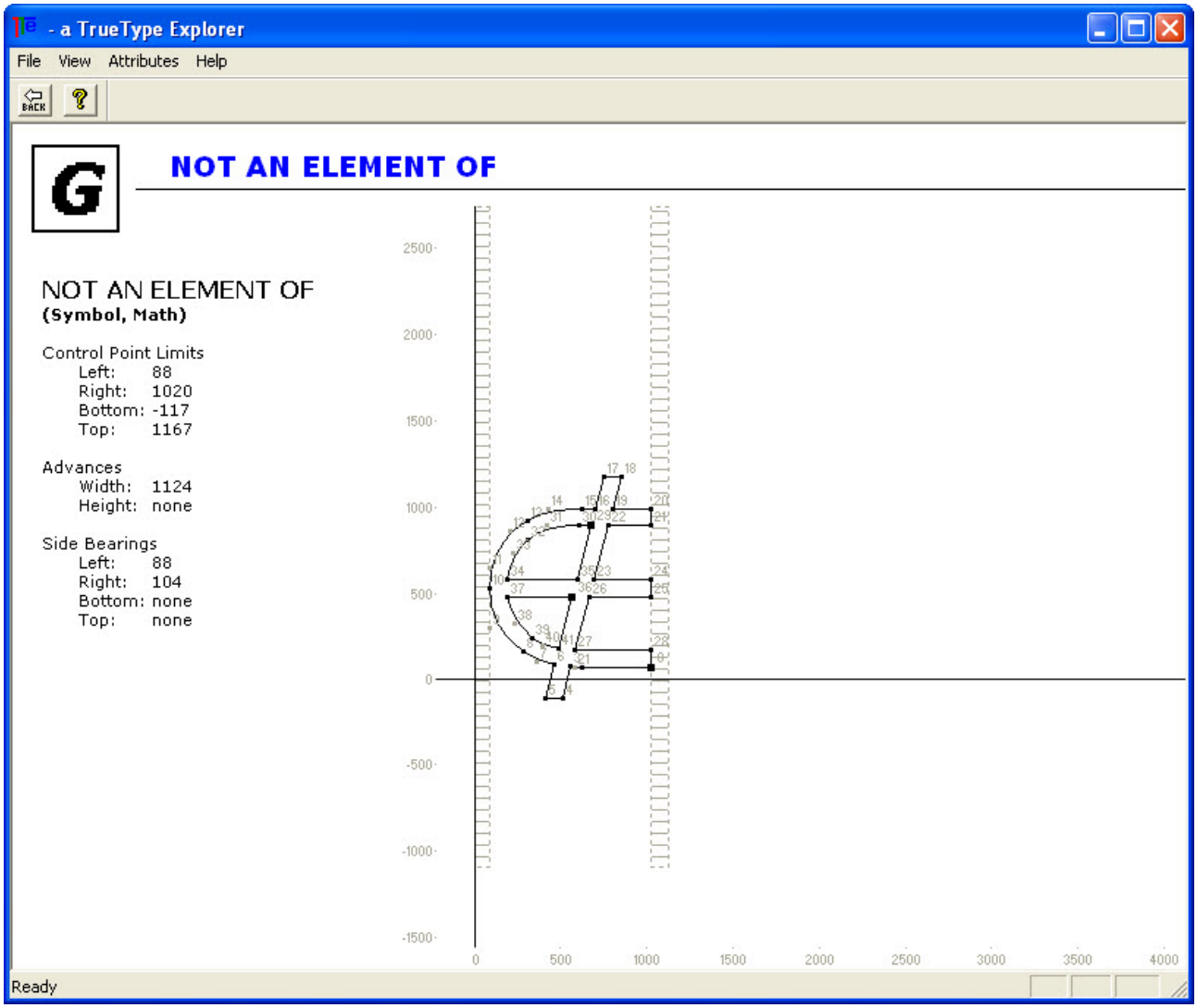

Figure 15: TrueType Explorer Dialogue

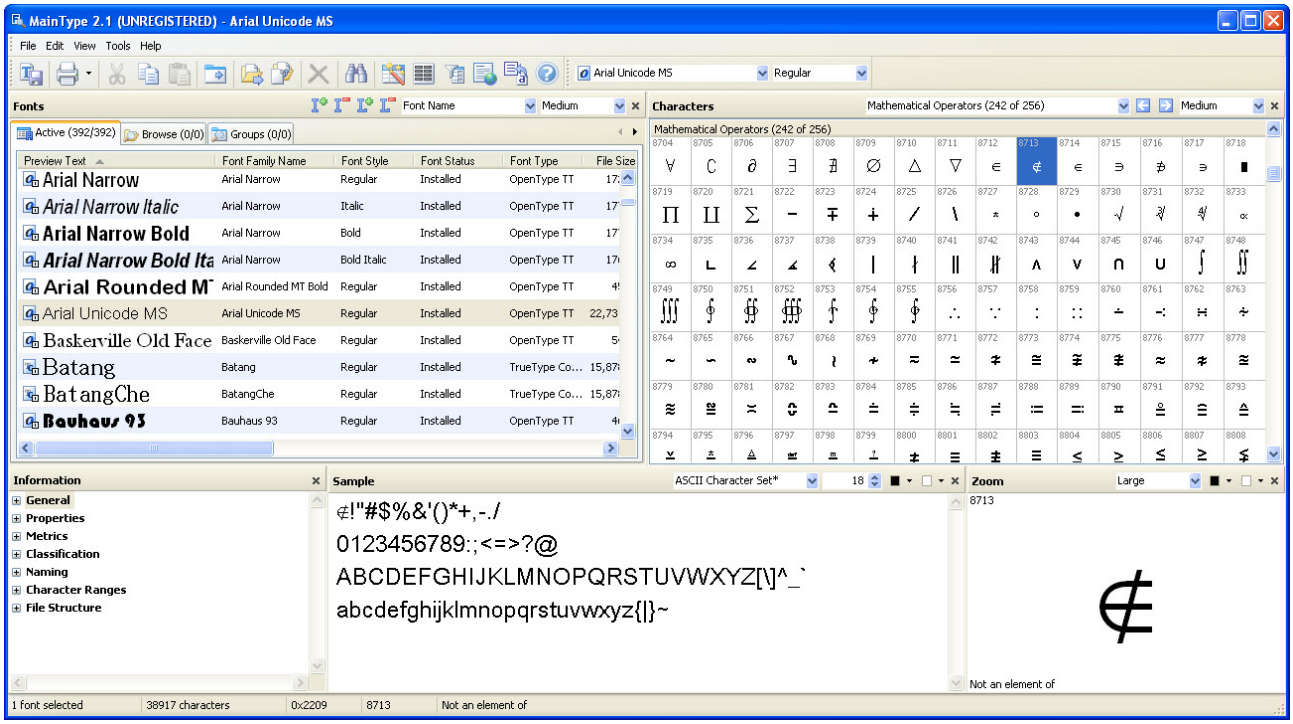

Figure 16: MainType Dialogue

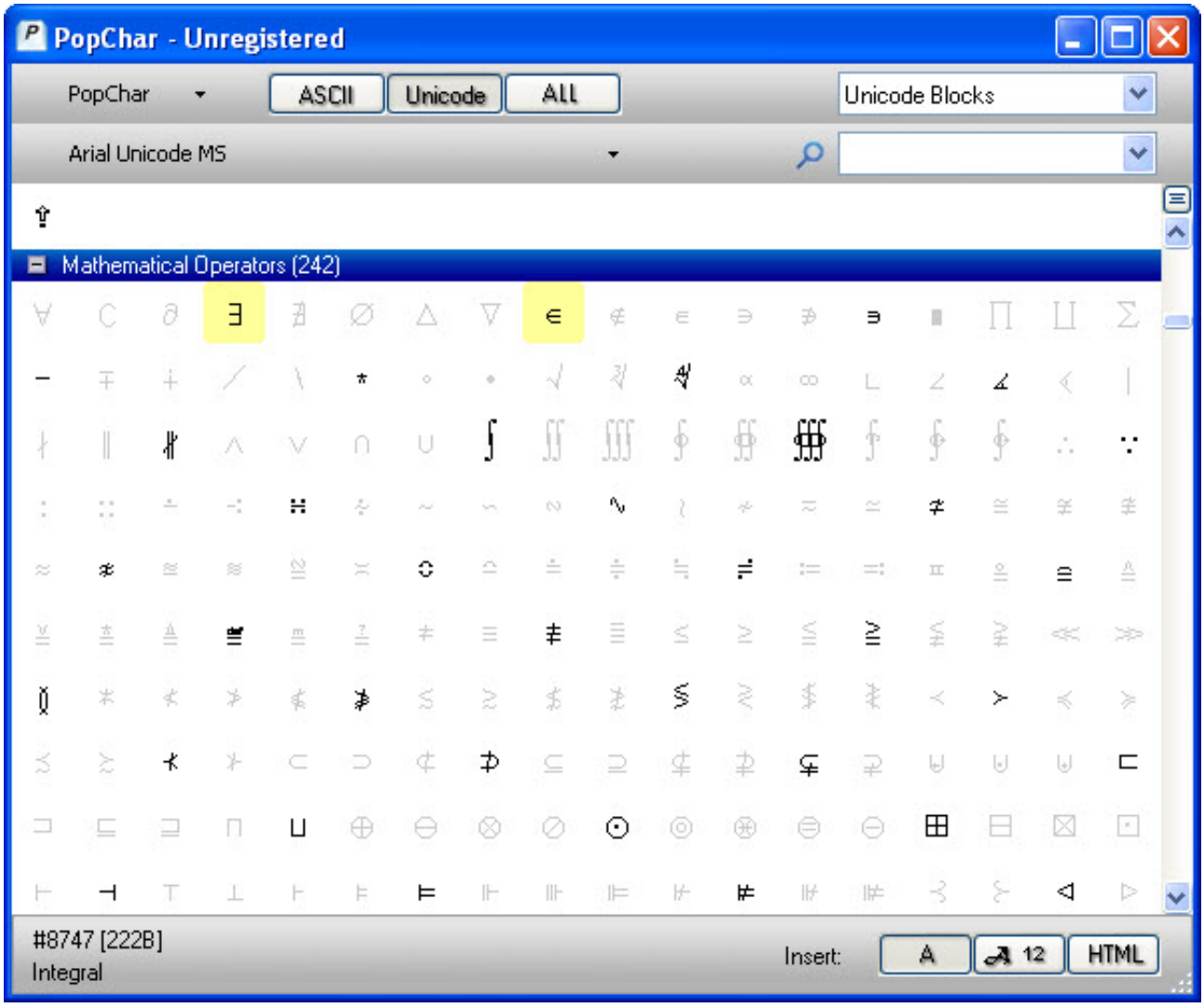

Figure 17: PopChar Win Dialogue