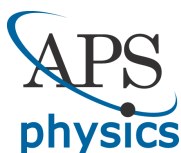# STIX Font Release Documentation

OpenType Font
Version 1.1.0

24 February 2012

Introduction

The Scientific and Technical Information eXchange (STIX) font is intended to solve the publishing needs of authors, publishers, printers, and others working in the scientific, medical, and technical fields. It is intended as a comprehensive Unicode based font of mathematical symbols and alphabets. The font is available royalty-free under the SIL Open Font License.

The intent is to provide a single font that can be used throughout the production process. The production process can be a traditional print one, be entirely electronic, or be a combination.

The project began through the joint efforts of American Mathematical Society (AMS), American Institute of Physics (AIP), American Physical Society (APS), American Chemical Society (ACS), Institute of Electrical and Electronic Engineers (IEEE), and Elsevier Science. These companies are collectively known as the STI Pub companies.

What is new in this release?

The original Version 1.0.0 STIX was packaged as 29 distinct font files. Version 1.1.0 provides the same set of glyphs packaged as a set of 4 text fonts and 1 symbol font. This new packaging will facilitate the use of the font on more desktop applications, and will specifically allow the symbol font to be used for equation editing in recent versions of Microsoft Word.

The following changes have been made to the glyph set:
- (02B2) The height has been adjusted
- (02F7) Symbol has been added
- (02C6, 02C7, 02DC, 02F7) Width has been added
- (203E) Upright and italic glyphs adjusted
- (1D730, 1D6F6) Glyphs enhanced
- (Bold Blackboard Characters) Moved from the PUA to STIXGeneralBold. (2145-2149) were removed and added to the 1D5xx range.
- (2219) Diminished the difference in size between the light and bold bullet operator
- (22C0-22C3) Bold shapes created and added to STIXGeneralBold
- (20EC, 20ED) Characters in STIXGeneralItalic have been moved below the baseline
- (2145-2149) Removed
- (22D2, 22D3) These have been swapped
- (22FF) Shape has been altered
- (23DC-23E1) Altered to diminish distortion when stretched
- (29BF) Glyph enhanced
- (2AFC, 2AFF) Text sizes created in STIXGeneral. 2AFF added to STIXSize2Symbols
- (E335, E37B) Corrected position in STIXNonUniBolIta
- (E387, E388) The shape of \midbaritlambda has been made equal to \lambdabar in STIXNonUniIta and STIXNonUniBolIta

- (1DA3/E041,1D8/E042,0347/E060,27CB/E09F,27CD/E0A0,A792/E0A1,26E2/E0E4)
  Moved from PUA to STIXGeneral.
- (E0387) Bold center dot removed from PUA
- (0347/E060, A792/E0A1) Moved from PUA to STIXGeneralBold.
- (2A2B, 2A2C) Fixed glyph 2A2B in STIXGeneralBold and added 2A2C to
  STIXGeneralBold.

In addition, an update was made to address compatibility issues between the font set and the Windows PostScript driver.

What is provided in this release?

Two folders are provided in this distribution. They are
- Fonts
- License

The Fonts folder contains the OpenType versions of the font within two sub-directories: STIX-General and STIX-Word. STIX-General contains the glyphs packaged as they were in version 1.0.0 as 29 separate OpenType fonts. STIX-Word provides the same glyphs packaged into 4 text fonts and one symbol font. The version number is 1.1.0.

The font is distributed under the "SIL Open Font License, Version 1.1". A copy of the license is in the separate License folder included with this distribution.

Font implementation decisions

Only the four basic styles, upright roman, upright bold, italic, and bold italic are intended for setting text.

The font contains:
1. Kerning pairs for Latin characters suitable for use with sizes 8pt through 12pt.
2. Standard ligature support for those ligatures included in the font.

Sans serif, fraktur, script, et al are intended to be used as variables or for other technical notation and are to be accessed via Plane 1 Unicode.

Regarding the Unicode doctrine for technical material that suggests any subscripts, superscripts, fractions and the like are to be indicated by markup: only such glyphs having assigned Unicode values are included within the STIX font. The limited selection of such glyphs within the STIX font, while reasonably comprehensive, by design does not include any such glyphs that would need to be placed in the private use area, nor does it include such glyphs having assigned Unicode values that would be better represented by markup in technical material.

Small capital letters are not part of the STIX glyphs and are not included in this release. STI Pub will consider adding them in a future release.

The next release will add LaTeX support.

Known font issues

STIX Fonts release 1.1.0 should work correctly with Internet Explorer 8 in standards mode. Web site developers who wish to support IE8 should set the document mode by specifying the mode meta tag; see http://msdn.microsoft.com/en-us/library/cc288472(VS.85).aspx#tools for more information. There are known problems with using these fonts not in IE8 standards mode or with earlier versions of IE.

Currently there is limited support for glyphs/characters in Unicode Plane 1 across many software applications and systems. This lack of support is not a font issue but rather limitations with the rendering software itself (e.g., browser, word processor, etc.).

Display issues and application crashes with Word 2010 in a Windows XP environment were reported and verified during the beta period. These issues have not been reported for more current releases of Word/Windows.

Feedback

Please direct any questions or general comments to the STIX Fonts project. Bug reports and technical support issues should be reported through https://sourceforge.net/projects/stixfonts/support.