Československé sdružení uživatelů TEXu

CSTUG

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s názvem

XeTEX: TEX plus Unicode plus OpenType minus complexity.

Přednáška se uskuteční v budově Fakulty Informatiky MU v **Brně, Botanická 68a**, v sobotu **17. 11. 2007** ve **12.30** hodin v posluchárně s označením **A107** napravo od vrátnice. Přednáška bude proslovena v anglickém jazyce bez simultánního překladu. Přednášející je autorem programu XeTEX, který je novým rozšířením Knuthova TEXu.

Abstrakt přednášky:

This talk will describe and demonstrate how extending TEX to natively handle the Unicode character set greatly simplifies the task of multilingual and multi-script typesetting. Because all characters of all the world's scripts are included in a single standard, it is not necessary to convert external encodings to a special internal representation, or to manage multiple input encodings for different languages, and any combination of scripts and languages can be freely mixed in a single document—even in a single line of text. The XeTEX extension of TEX makes it simple to use Unicode throughout the typesetting process, from input text to hyphenation tables and font access.

In addition to adopting Unicode as the standard character encoding, XeTEX has built-in support for modern font technologies (TrueType, OpenType, AAT), including glyph layout behavior defined in font tables. This means that complex scripts such as Indic and Arabic can be typeset with no special font setup and configuration. For example, using an off-the-shelf Arabic font, whether from a major vendor or a free font developer, involves no complex conversion processes or the creation of an "alphabet soup" of .tfm, .vf, .ocp, .map, .enc, .fd, etc. files; just drop the .otf or .ttf file into the computer's Fonts directory, and select the typeface in a XeTEX document.

Because XeTEX is using Unicode text and fonts, rather than a complex collection of macros to provide the script support, it is trivial to include other scripts such as Japanese, Devanagari, or many others in the same document. There is no need to worry about co-operating or conflicting macro packages, active characters, preprocessors, etc.; all we need is an appropriate Unicode font that covers the required character repertoire.

Recent work on XeTEX also includes support for OpenType math fonts, which can contain a huge collection of math alphabets (italic, bold, blackboard, fraktur, script, etc.) and symbols, all encoded according to the Unicode standard. While Unicode math typesetting is still in its infancy, with fonts only just beginning to appear, working with Unicode for both text and math will make it easier to integrate TEX-based systems with today's computing infrastructure, where Unicode is the dominant text encoding standard both online and for all major desktop platforms.

By freeing TEX from the complex web of legacy encodings and font configuration files, XeTEX not only extends TEX to more easily support all the world's languages; it also encourages typographic creativity and variety, by giving ordinary users access to thousands of previously hard-to-use typefaces. Enjoy this freedom!