Welcome to WinTriangle

{mosauthorxtd /text:Written by #author# and Laura Schmidt}WinTriangle is a specialized Rich Text Format (RTF) word processor for Windows. It can create, display and voice conventional text and mathematical and scientific symbols and expressions. WinTriangle has menus and hotkeys that allow the user to write and voice many Windows screen fonts, as well as the Triangle.ttf font. The Triangle.ttf font contains specialized markup symbols that permit almost all math and science equations to be expressed in linear form. It can import XHTML and MathML files and creates RTF files that are readable in most word processors.

WinTriangle can be used to write text and complex math and science expressions simply and quickly. It has a fully functional voice readout that can speak all elements of a document as well as WinTriangle menu items, hotkeys, and other instructions. Documents can be printed or copied to the clipboard.

One of the goals of WinTriangle is to provide an RTF word processor with equation editing capability for both sighted and blind people. When used with the Tiger tactile graphics embosser and the Accessible Graphing Calculator, WinTriangle allows the communication of scientific information between blind and sighted people to occur exclusively in writing with no intermediaries.

WinTriangle requires little more than basic computer literacy. The learning curve is low for blind users and extremely low for sighted users. No knowledge of Braille is required for sighted users.

WinTriangle was first released in beta form in September, 2001. The program has been revised and expanded several times since initial release and has been ported to the current versions of the Windows operating system by Oregon State Universities Technology Access Program.

WinTriangle is currently used by several visuall impaired university students in science and engineering at Oregon State University. The textbooks for these students have been made available in electronic format readable with WinTriangle. Professors provide homework and examinations either in a form printable on the Tiger embosser or in Triangle notation. When completed, the students hand in their work directly to Professors or Teaching Assistants. No assistance is required from readers, scribes or Braille translators at any step in the process.

System Requirements

The following are the minimum requirements to run WinTriangle:
- A Pentium III or later PC
- 128MB or more RAM
- 5MB or more disk space
- Windows 2000 or later
- Optional Speech API (SAPI) 4.0 and 5.1

WinTriangle 4.0.0.0 features:
- File Imports The File Import feature lets users import XHTML, MathML files into Triangle RTF notations. Text files can also be opened for editing. Images in XHTML are not imported.

- File Export RTF Files can now be exported to XHTML. The equations are converted to MathML. Images in the RTF documents are exported as png images so that they can be converted to SVG using tools like autotrace.

- Multiple Voice Engines WinTriangle supports both SAPI 4.0 and SAPI 5.1. Allowing users to choose from a wide range of Text-To-Speech Voice Engines.

- Dual TTS Voice Feature WinTriangle users can use different voice settings for normal text and math symbols. The feature is only enabled in SAPI 5.1 based voice engines.

- Braille Displays Braille Display support has been added to the application. WinTriangle supports Braille displays connected to the serial port. Only Alva displays have been tested.

- More Fonts Files to read Euclid Math One, Euclid Math Two fonts have been added. More fonts can now be added dynamically.

- Unicode Character Set All Unicode characters are supported by WinTriangle.

- Macros & Customizable Keyboard Shortcuts User defined hotkeys and macro feature has been added. Taking advantage of this feature users can now create there own keyboard shortcuts (hotkeys) to insert symbols. Hotkeys like Alt T, A which requires two key strokes, can be now used to partition the hotkeys into categories.

- User Tools Users can now run console mode programs from WinTriangle. Allowing users to run application like Java or C++ compilers, latex2tri(latex to triangle converter) and many other program.

- HTML Help Context sensitive help is now available with the application. Users can learn how to use the features descried above using the help which is compatible with all major screen readers.Road map for future development:

- Add an in place formula editor
- Paradigm shift towards more XML oriented content management.
- Add the MathML font generated by stix font project to the application.
- Better documentation and user training.