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Al P. Maneki* (apmaneki@earthlink.net), 9013 Nelson Way, Columbia, MD 21045. *The PreTeXt-Nemeth Connection: Enabling Sighted and Blind People to Share the Mathematical Experience.*

The primary problem for exchanging mathematical concepts between blind and sighted persons has more to do with the channels of communication than the inability of blind people to comprehend and do math. For sighted people, this channel is visual. For blind people, it must be tactile, primarily Braille.

The development of an economical, automated and reliable means of converting printed math to Braille and the inverse process has long been a stumbling block. Today, with PreTeXt, an uncomplicated XML vocabulary that uses LaTeX syntax for math, and the Nemeth Braille code, we are optimistic that we can have this economical, automated and reliable process.

The Nemeth Braille code is a rich form of mathematical expression. Any statement that can be rendered in PreTeXt can also be rendered in Nemeth.

The nonlinear forms of mathematics (subscripts, superscripts, etc.) can already be translated into the linear codes of LaTeX, ASCIIMath, and PreTeXt. There are many technical details to overcome when translating PreTeXt to Nemeth. Initial results in this effort to date have been encouraging. Our goal is to develop software that can transcribe a PreTeXt book into a Nemeth Braille book accurately enough to pass the proofreading prowess of a certified Nemeth Braille proofreader. (Received September 02, 2019)