

Comments proffered by:

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3. *What benefits or concerns would the treaty proposal create?* Please comment generally on the objectives of the treaty proposal, and how such objectives could facilitate access for the blind and visually impaired. Is the treaty proposal likely to meet its objectives? Would there be any legal or practical impediments to implementing the treaty proposal in the United States? What issues should the United States consider with respect to application of the treaty proposal in foreign countries?

The treaty appears to be quite comprehensive in its approach to the faithful execution under Title 17, and should accomplish its intent for the ease of legal cross border migration of specially formatted works for the visually impaired. The most practical impediment, in my estimation, is the funding apparatus in developing countries, and to some extent in the U.S. The United States could seek to alleviate some of these fiscal concerns, particularly with the political will to encumber funds toward the development of low-cost technology for creating digital access for the world's visually impaired readers.

4. *Other possible courses of action that would facilitate access by "blind, visually impaired, and other reading disabled persons."* Please comment on any additional, possible methods of improving accessibility about which the Copyright Office and the USPTO should be aware, including possible roles for WIPO, the U.S. government, and the commercial and noncommercial private sectors.

The prevalence of electronic (E)-books as alternate publications concurrent with the release of new print works by publishers, both domestically and abroad, seems to me a potentially facile method for creating accessible versions for blind and otherwise print disabled readers. I define E-books as those produced for the Amazon Kindle, Sony E-Reader, and Barnes & Noble Nook, among others, as well as E-books downloadable and viewable on a computer screen with proprietary software packages. These E-books are visual electronic files and thus inaccessible to the visually impaired due to their incompatibility with screen reader software and currently available portable accessible audio book players. Initially publishers had sought to accommodate visually impaired consumers with access to aforementioned E-book players by allowing E-book files to be read as text-to-speech (TTS) on players that support TTS functionality. Commercial interests of copyright holders, represented by the Authors Guild, intervened and publishers en masse subsequently deleted TTS functionality for most E-book files.

If the TTS component is a simple programming feature for publishers to include with the publication of E-Book files, then the insertion and/or enablement of TTS would be a major step forward for increasing the availability of printed, copyrighted works for visually impaired readers. Once the copyright protection issues were worked out between authors, publishers, disability rights advocates, and consumer groups, the percentage of available titles to the visually impaired would increase astronomically from under 1% annually where it stands in the U.S., thanks in large part to stakeholders such as the National Library Service for the Blind and Physically Disabled, Bookshare.org, Recordings for the Blind and Dyslexic, Audible.com, and others, and through international libraries for the blind. Improvement in the accessibility of the E-book devices themselves would be required to ultimately achieve full accessibility, but I have no doubt that innovation would lead the way forward to the development of such devices.

TTS in its current development is at best a poor substitute for human narration of printed works, yet computer speech synthesis continues to improve and please the ear of the discriminating visually impaired listener. Thus, the availability of a substantial percentage of new book titles produced as E-books with a TTS component would go a long way toward leveling the playing field for visually impaired consumers by giving them fair and equal access to the full gamut of works available to sighted readers.

The LC Copyright Office and USPTO could begin to develop a framework, in conjunction with WIPO stakeholders, to ensure the availability of text-to-speech electronic book by all commercial and noncommercial publishing houses, through legal or regulatory means, and/or with subsidies to facilitate TTS file features for all the world's forthcoming electronic books.

Finally, developing TTS for E-books is not the end-all to the problem of accessibility for visually impaired readers, and so the encouragement and/or subsidization of research methods to convert proprietary electronic files to refreshable Braille (brf) formats, development of touch screen Braille for cell phones and computer screens, and other innovations for developing better stationary and portable optical character recognition (OCR) scanners should at the very least be undertaken and supported by the CO and USPTO in accordance with the proposed Treaty.