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Text-to-Speech Scanning Significantly Increases Access to Library Materials for Visually Impaired Students

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Summary

More than 30% of visually impaired students use auditory readers to extract written information and convert it into text1, but the process is often cumbersome and creates documents with many inaccuracies. The Florida School for the Deaf and the Blind has successfully implemented a scanning procedure using the Plustek OpticPro A320 large format A3 book scanner and Open-Book software that improves the speed and accuracy of book scanning and allows greater access for all visually impaired students.

Background

Digitizing printed materials is an important aspect of providing accessibility services to the visually impaired at libraries, schools and universities, yet has been plagued by a major challenge: traditional scanners were slow and incapable of producing the quality of scans needed for OCR (optical character recognition) software to perform at its best. The result was inaccurate character rendering that were difficult to understand by visually impaired students and required additional editing by administrators

The Florida School for the Deaf and the Blind has been using the OpticPro A320 in conjunction with OpenBook software to digitize text for visually impaired students. In their process, an administrative assistant will scan each book using the A320 and OpenBook software , which was specifically designed to enhance success for people who are blind or have low vision and who need access to printed and electronic materials.

Administrative Assistant Robin Felder has been using the Plustek OpticPro A320 to scan books

for visually impaired students with great success. She initially chose the scanner for its speed, but was pleasantly surprised by the accuracy of its scans. In an interview she told Plustek that the editing she had to do with the scans from her previous machine had all but been eliminated since using the A320.

Felder also expressed that being able to place the whole book on the scanner and still get a scan without distortion greatly expedited her workflow, and that it took only seconds to scan each page. She is now able to finishing scanning a 500 to 600 page book every three days or so.

The A320 was designed by Plustek to offer a low-cost, high-resolution device that works on both graphics and text. The A320 uses high-resolution Sony CCD (charge-coupled device), which combines with a high quality lens to generate 1,600 dpi optical resolution. In layman's terms, this combination of technology allows it to it "see" more details on the original document.

Along with this powerful coupling, Plustek also designed an image tuning technology that optimizes the interaction between hardware and software. It works by smoothing out pixels and creating better balance between highlights and shadows, rending a much clearer and enhanced image quality, regardless of output type.

Established in 1986, Los Angeles-based Plustek is a leader in scanning solutions. Their products include high-speed document scanners, mobile, USB-powered scanners, book scanners, as well as security equipment and film scanners. Their OpticPro A320 (MSRP $549) is a large-format A3 flatbed scanner. The Advanced OpticBook A300 (MSRP $1,699) is a large-format A3 book scanner that comes bundled with Book Pavilion software and has a beveled edge that eliminates nearly all distortions caused by a book's binding.