

Multimedia Textbooks and Beyond: Speech Processing for People with Disabilities

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In 1995, Recording for the Blind & Dyslexic began their Digital Audio Book Project. RFB&D is the United States' only federally chartered provider of recorded textbooks and reference materials for people who cannot read standard text due to a visual or perceptual disability. This is an attempt to combine recorded speech, text, graphics, and images on a CDROM that can be accessed using standard technologies. The project was originally intended to provide people with print disabilities an alternative that is functionally equivalent to conventional books. Instead of an audio tape player and multiple cassettes, a PC and one or two CDROMs can be used for each book. There are also specialized players now available. In the future, it may be possible to use commercially available MP3 players. The first prototype was demonstrated in 1996. In 1997 RFB&D took the lead in a worldwide effort, known as DAISY, to define the format and the software needed to author, manufacture, and access such books. The project attracted wide attention because it sets the foundation for creating multimedia textbooks. The possibilities for how books, magazines and journals can evolve are greatly expanded. In the fall of 2001, RFB&D began pilot testing in selected schools throughout the United States. Beginning with the 2002-2003 school year, the digital books will be generally available to RFB&D's registered members. In this talk, the project will be reviewed and the functionality of the books will be demonstrated.

This is one successful example of combining speech processing technologies to produce an aid for a class of people with disabilities. People with communication disabilities (hearing, speech, vision, dyslexia) represent a substantial economic market segment. With the advent of more powerful speech technologies, many more new products and service opportunities are possible. For every opportunity there are multiple new technical challenges to overcome. The goal is to inspire many others to take up these opportunities and challenges.