

Accessible, Large-Print, Listening, & Talking eBook (ALLT)



The ALLT e-book is an iPad app that builds on the capabilities of standard e-book readers by adding the ability to synchronize an audio recording of a user reading with the text. Originally conceived to enable visually impaired users to re-experience a reading session with a loved one through replaying the recording, ALLT has been expanded to serve the needs of individuals with a wide variety of sensory and fine motor impairments.

Accessible

ALLT supports multiple input modalities



Alongside standard touch screen gestures, the ALLT book can be controlled using a wired or wireless keyboard with large target buttons. An exploration into voice commands is currently underway.

Large-Print

Custom font size and access to digital libraries



Just like any other e-book reader, ALLT has adjustable font sizes for users with different visual acuity. It can also seamlessly download free out-of-copyright books from various digital libraries.

Listening

Reading can be recorded for later playback



When using ALLT, a user can record her voice while reading, preserving the reading experience for later playback, either by herself or by another user who cannot read on his own. ALLT enables the user to synchronize each sentence read with the corresponding place in the book.

Talking

Re-experienced reading sessions through playback



Users can play back recorded readings made either by themselves or their caregiver to re-live the reading session. To fill in recording gaps, ALLT uses a text-to-speech engine to enable playback of passages that were not previously read.

Pilot Case Study

Our pilot study participant, "Trudy", is a highly educated 40-year-old woman with Multiple Sclerosis. She has three active tech-savvy caregivers who read to her. Due to tremors caused by her affliction, she is unable to hold a traditional book or a tablet.

She has been using ALLT with a stand and the accessible keyboard to have books read to her, and also to read books herself. She has used ALLT as a social reading platform, to read for pleasure and to maintain her pronunciation through practice.

Usage Scenarios

Although our exploration of ALLT has so far focused on individuals with visual or fine motor challenges, the ability to record and play back speech can be useful in a variety of scenarios, including improving pronunciation in English, rehearsing lines for a play, or even learning to read in childhood.



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