Introduction: Hello everyone and thanks for taking the time to check out my poster, I'm excited to share with you how UAB Libraries is leveraging 3D printing technology to enhance accessibility and engagement with archival collections. In recent years, advancements in 3D printing have opened new avenues for safely replicating fragile objects and integrating interactive elements into exhibits. Today, we'll explore how this technology is transforming archival practices and visitor experiences.

Our primary objectives were to showcase UAB Libraries' 3D printing capabilities, enhance exhibit interactivity, and minimize physical handling of delicate historical materials. We aimed to provide greater accessibility for all patrons, especially those with visual impairments, by incorporating touchable 3D replicas into our exhibits.

The chosen exhibit focused on otolaryngology and included a fragile book with two pages that had raised text. We wanted to let the public interact with the pages but the books condition would not allow that, so we started exploring other options. The book pages were too flat for traditional 3D scanning, so we experimented with different approaches. We started out by using Tinkercad to manually draw raised letters, which didn't work at all, and gradually shifted to trying out various 3D conversion software options. Looking Glass seemed promising but, like 3D printing, there was not enough depth. Eventually we found some software called 3DPEA that provided a result worth printing, which was done in gray resin using a Form3+ printer.

In addition to the book pages, we sourced and printed open-source scans of anatomical features including an inner ear with Braille labels, a skull with braille lettering, and an eye that could be disassembled and reassembled to enrich the interactive components of the exhibit.

Results and Impact: Despite challenges, 3D models significantly enhanced public engagement with the exhibition, offering tactile experiences and preserving archival treasures for future generations.

Key Takeaways: Our experience underscores the importance of experimentation and perseverance in 3D printing.

Future Directions: Moving forward, we aim to explore further applications of 3D printing technology in archival settings and promote accessibility in cultural heritage preservation.