# Hack Davis – 10min Overview

## Slide 1

Hello my name is Charles LaPierre, I am the Technical Lead for DIAGRAM & Born Accessible. My Colleague is Alex Cabral who is our UI/UX research expert at Benetech.

Benetech is a different kind of tech company. We’re a nonprofit whose mission is to empower communities in need by creating scalable technology solutions.

## Slide 2

Our work focuses on global education and literacy, making it safer for human rights defenders in over 50 countries to document and collaborate on human rights violations, and empower those who are struggling to find the resources and services they need to thrive.

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## Slide 3

Our mission is to leverage technology to help humanity by connecting Silicon Valley technical knowhow with the communities who are in need.

## Slide 4

Bookshare is our flagship success story which is the largest library in the world of accessible books for people with a print disability. Serving over 15 million accessible ebooks, to over 700K users with over 780K books from 870 publishers in 47 languages.

## Slide 5

Our Human Rights program has made a huge difference in how data is collected securely and now we are focusing on how to privately share and collaborate with video using machine learning.

## Slide 6

ServiceNet and our Data for Inclusion project is helping service providers have access to accurate real-time data about the resources available for their clients.

## Slide 7

We at Benetech advise, build and foster the software which drives a social good ecosystem.

## Slide 8

Bookshare provides a number of alternative formats of the books we have curated allowing the reader to pick the format that works best for them. These include Braille, audio, EPUB, and Microsoft Word.

The DIAGRAM Center works with our communities and standards bodies to improve access to education materials. We do this by new creating tools, standards and best practices to support different learning needs including access to information for those disabilities not traditionally associated with a print disability. Such as those with a cognitive or physical disability.

Service Net helps to eliminate duplicative siloed information that multiple organizations gathered and were often times out of date and inaccurate. By providing a platform where these organizations can trust each other and work together to share their data with each other so as to better serve their communities.

Our Data for Inclusion effort gives people with a disability a voice as they seek employment and education.

## Slide 9

Born Accessible is near and dear to my heart. Adding accessibility as an afterthought is 10 times more costly than if you build in accessibility initially. We are working with publishers to help improve their production workflow so that the ebook they create is truly Born accessible and no special libraries (like Bookshare) would need to exist to serve the disabled since everyone could buy the book which is accessible. Just like curb-cuts that were built for wheelchair access are used by those pushing strollers, accessible EPUBs can "Read-Aloud" for those who are doing other tasks while reading such as driving.

Benetech also has created a certification program call "Global Certified Accessible" that will stamp those books which pass our certification with a gold stamp that folks can look for to ensure that the book they are purchasing is accessible for them.

## Slide 10

The DIAGRAM Center builds tools, best practices, and improves standards around accessible access to education materials. Some of the projects we have done include and accessible Image and code repositories, creating standards and best practices around making STEM accessible. We create a yearly DIAGRAM Report highlighting new technologies being used in education that can be harnessed to create accessible and born accessible classrooms.

## Slide 11

Some of the specific areas of STEM accessibility include:

* Images
* Diagrams
* Charts
* Videos
* Math diagrams and equations
* VR and AR
* 3D and tactile images

## Slide 12

Benetech Labs is our new product development arm, where we explore new areas of need by engaging with communities, other technologists, and non-profits in the ecosystem around an issue to prototype new solutions. We experiment to find effective tech solutions that Benetech can take to scale and achieve large, lasting social impact

## Slide 13

Math is hard enough to learn, now imagine not being able to see the math equation and your only access to the math is a description spoken to you. I don't know about you but for complex algebra and calculus by the time you read the entire equation I would have forgotten more than half of the equation. Now add on other disabilities like dyslexia, dyscalculia, or dysgraphia to the mix and you quickly understand we need to have a better solution.

## Slide 14 (Alex)

As more and classes are moving digital the need for an inclusive accessible math solution is required. Mathshare will give the students their independence while providing the feedback needed to the teacher to help them better understand what the student knows and where they need to focus more on.

## Slide 15 (Alex)

Here is a screen shot of our Mathshare project where you have three areas of interest.

1. Math solution space including the steps taken
2. Notes area describing each step
3. Input area including dedicated buttons, symbols, operators etc.

## Slide 16 (Alex)

The first is an accessible Sketchpad for Mathshare that will be used to create labelled accessible shapes. Project information can be found at tinyurl.com/ugptajd

## Slide 17 (Alex)

Project idea 2 is an Accessible Survey Logic that will help us create surveys that will ask you different questions based on previous answers which currently is possible but not accessible to those using a screen reader. Project information can be found at tinyurl.com/rd6wwbl

Thank You