



Micro:bit

BitBois

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Brief Description of System

Devices:

- Laptop/Desktop
- ≥ 1 Micro:Bit

UI components:

- HighCharts Graph
- Play/Pause Data View
- Rename Device
- Connect/Disconnect Buttons
- Download Data
- Help

APIs:

- Bill Siever API

Brief Description of Users

Users	Environment
High School Teachers	High school classrooms
High School Students	
Middle School Teachers	Middle school classrooms
Middle School Students	

High-Fidelity Prototype

Link to project: <https://2023-ui-sp.github.io/6-microbit/>

Instructional Content

Open the application

Once open, click the connect button and select the Micro:Bit you want to retrieve data from

The live data will now be displayed on the graph

Pause/Play Button:

The pause button will prevent the graph from updating so data points can be inspected. After the data has been paused the Pause Button will become a Play Button that can be used to resume data streaming visualization.

Help Button:

The help button (found in the top right) will display information on how to use the application

Disconnect All Button:

Disconnect All disconnects all connected Micro:Bits

Download Button:

To export the collected data hit the Download Button. Once pressed, the Download Button exports all collected data in csv files.

Usability Goals + Concerns

Goals:

- Easy to use
- Functional
- Easy to learn
- Responds Quickly

Concerns:

- Live data and zoom/pan conflicting
- Micro:Bit differentiation
- Micro:Bit individual downloads

Next Steps

Completed Elements	Work In-Progress Elements	To-do Elements
Connect Button	Graph	Play/Pause Live Data Button
Disconnect All Button	Help Button	Rename Button Functionality
	Download Button (Raw and Modified Data)	