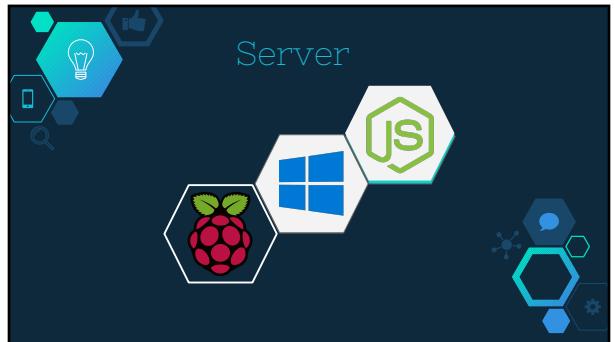




Server: In depth

How does Ventana control devices?




Server Platform Change

- HoloHub server used to be based on:
 - Python
 - Flask API Server
 - Raspbian Linux
- From updated Client Constraints:
 - Node.js UWP
 - Express API Server
 - Windows 10 IoT Core

UWP (Node.js)
Express Server & Router
Module Connector
Wink
Sonos

Server Architecture Change

- Previous structure involved a cloud & local server.
- New architecture requires only a local server.
- Modules work independently & sandboxed
- Connected together via the HoloHub API Server



Targets: In depth

How does Ventana spawn controls?

Targets

Went from very distinct images to a generic logo.

- Dynamic Data Assignment to predefined IDs
- Programmatically simpler to deal with
- Faster

Viewer: In depth

How does Ventana place and interact with controls in the world?

Device Controllers

New User Feedback:

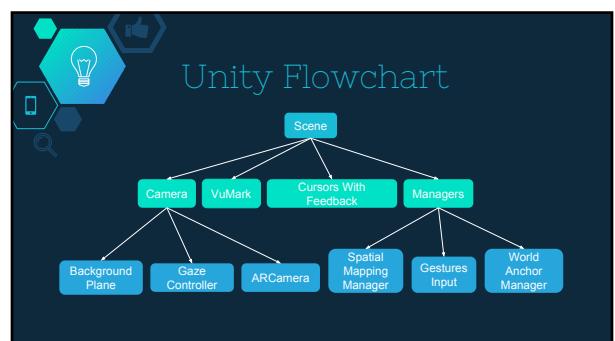
- Button highlights when gazed upon
- Cursor change when a button is selected
- Auditory feedback to user after button click

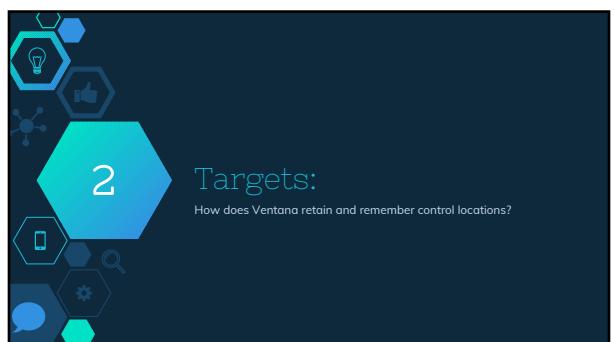
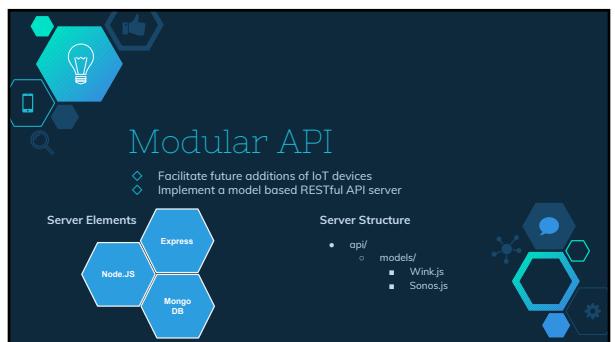
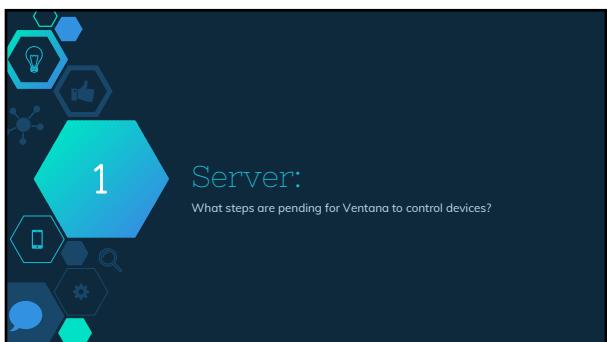
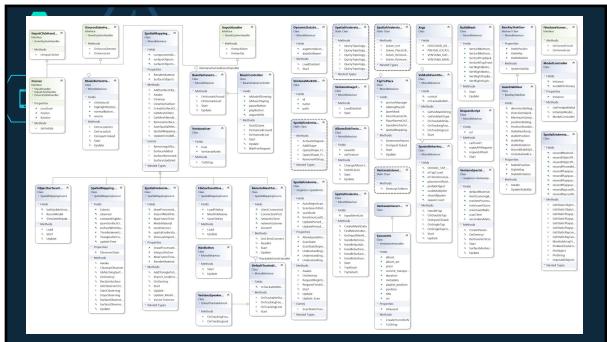
Spatial Mapping

World Coordinates

The Nitty Gritty

How does Ventana work?





Restore Locations

- Save World Anchor data to HoloLens
- Restore your Environment

Dynamically Assign IDs

- Change what model each VuMark code corresponds to
- Use this ID to call specific endpoints

Viewer:

How will Ventana place and interact with controls in the world?

Implement Modes:

Tap to Place and Regular

Implement Settings:

Room Selection and Device Configurations

- Configure and discover controllable devices
- Change VuMark mappings
- User Customization

What to do?	Dec.	January	February	March	April
Unity & Server Development	✓	✓	✓	✓	✓
Finalize Positional Tracker		✓	✓	✓	✓
Infrastructure Deployment		✓	✓	✓	✓
Integrate Wink Hub		✓	✓	●●	●●
➤ Lighting Control			●●	●●	●●
Determine 3rd IoT Device		✓	✓		
➤ Add 3rd Device			●●	●●	●●
Testing & Deployment		●● On-Going Process ●●			

“Intelligence is the ability to adapt to change.” - Stephen Hawking

