

**Arseny  
Izotov**



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Lad**

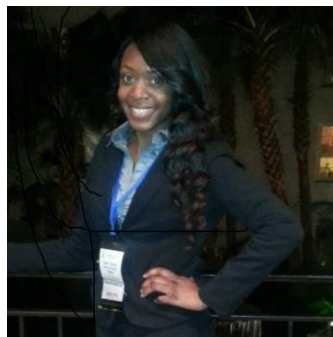


## IntelL-E-Ds

**Alden  
Michaels**



**Sade  
Luwoye**



## Today's Outline

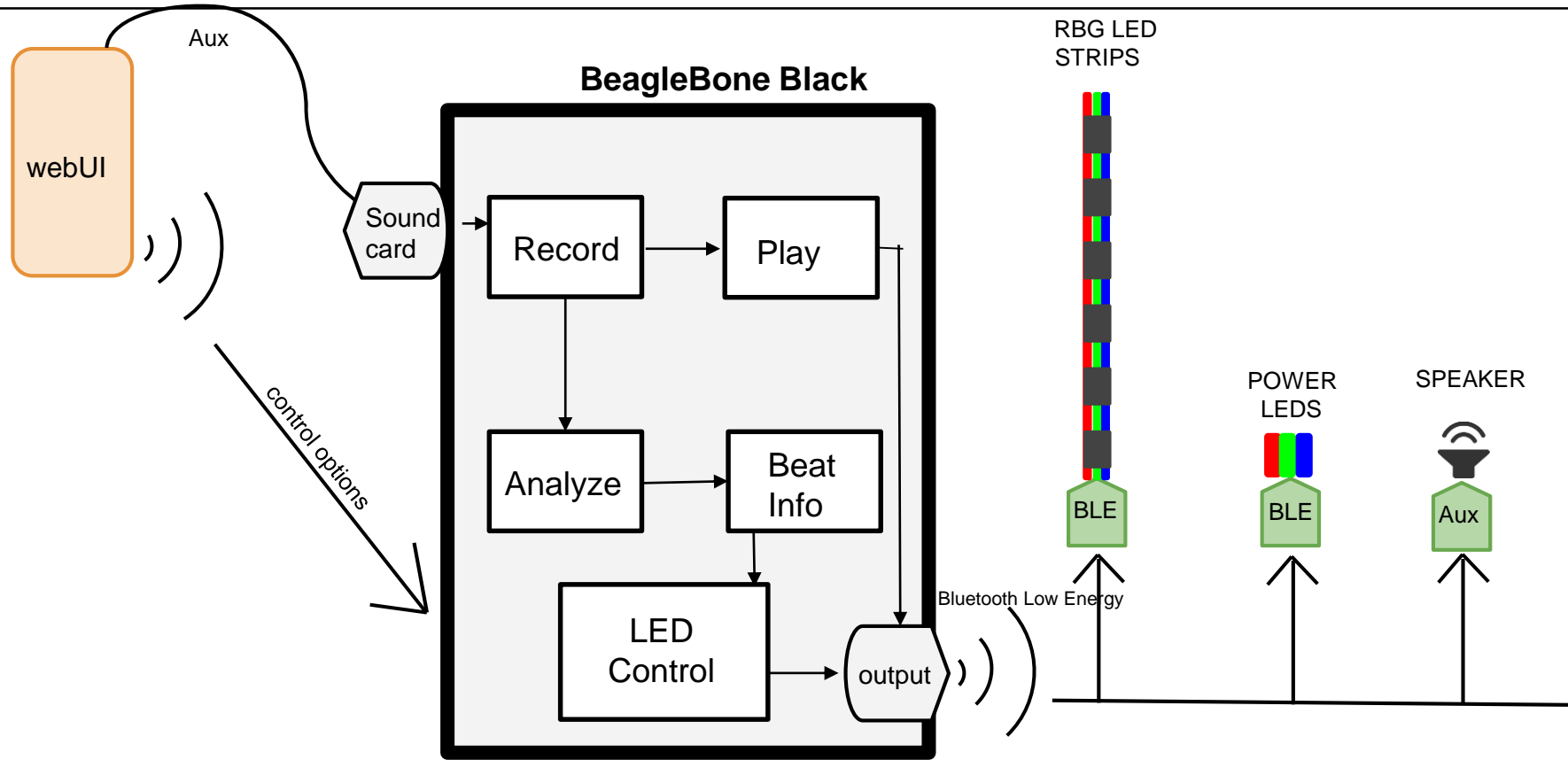
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- Recap: the InteLED's vision
- System Diagram
- Current Status
- FPR Goals
- Demonstrations

# The InteL-E-Ds Vision

- LED Music Controller
  - “Plug N’ Play” music from phone
    - Auxiliary
  - Calculate beats over time
  - Control LEDs to vibe with song
- Static Light Fixture in Room
  - Control LEDs with webUI “remote”
- Final Product Price < \$200

# The Big Picture



## Current Status

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- Each subsystem fully operational
- System functions with 90% accuracy using .wav files
- Live stream accuracy not optimal
  - Current analysis too computationally intensive for embedded device
  - Developing lighter beat detection algorithm

## FPR Deliverable

- Live Stream Fully Operational
- Coordinating lightshow and song vibe (LED color choices)
- PCB for LED Modules
- Case for Device
- Specifications
  - Function for 30+ minutes
  - 90% beat detection accuracy
  - < \$200

# Demonstrations

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- System Performance with .wav file
- System Performance with “Plug n’ Play”
- WebUI

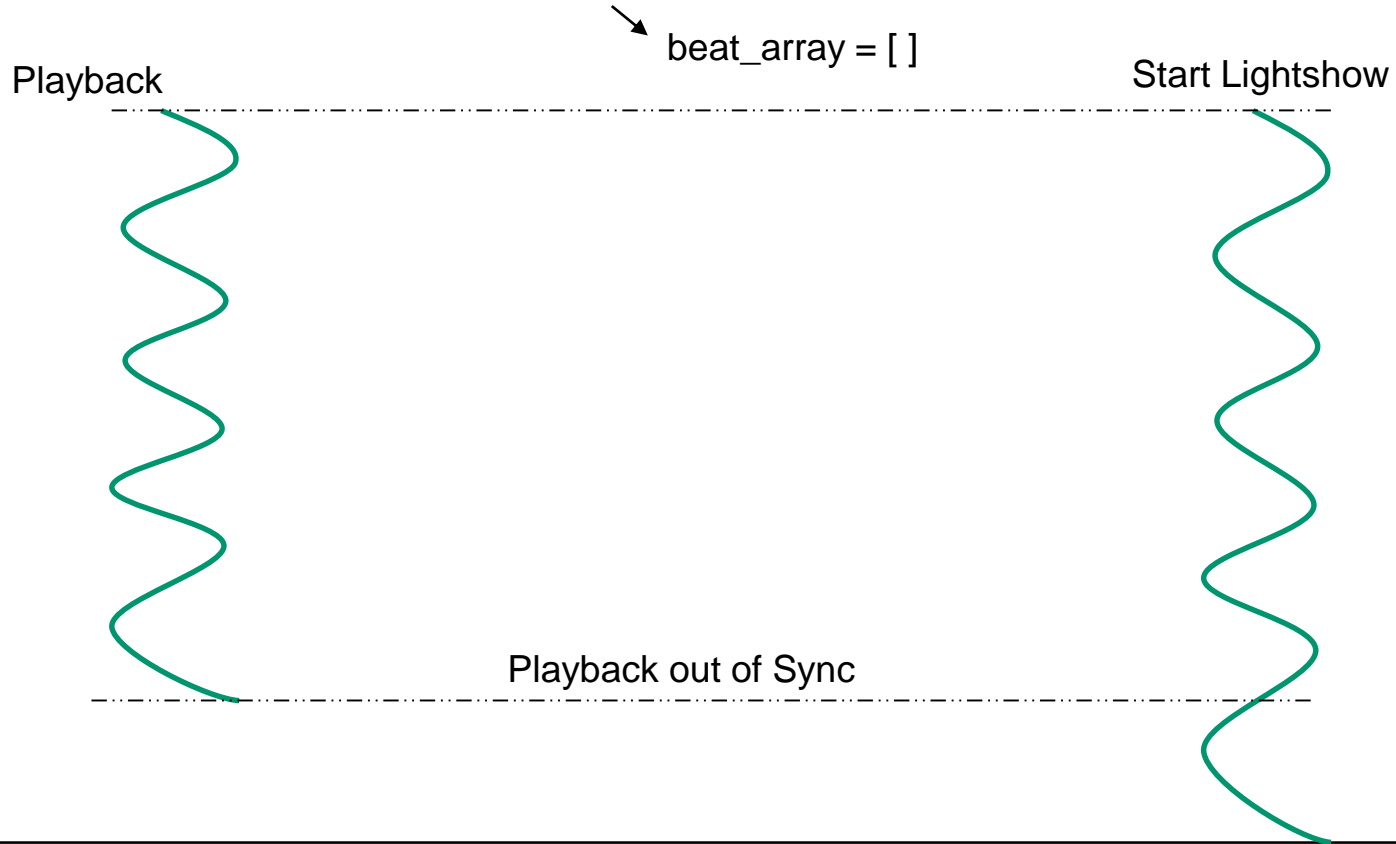
# Demonstration



# WAV File

# Analysis

# Lightshow

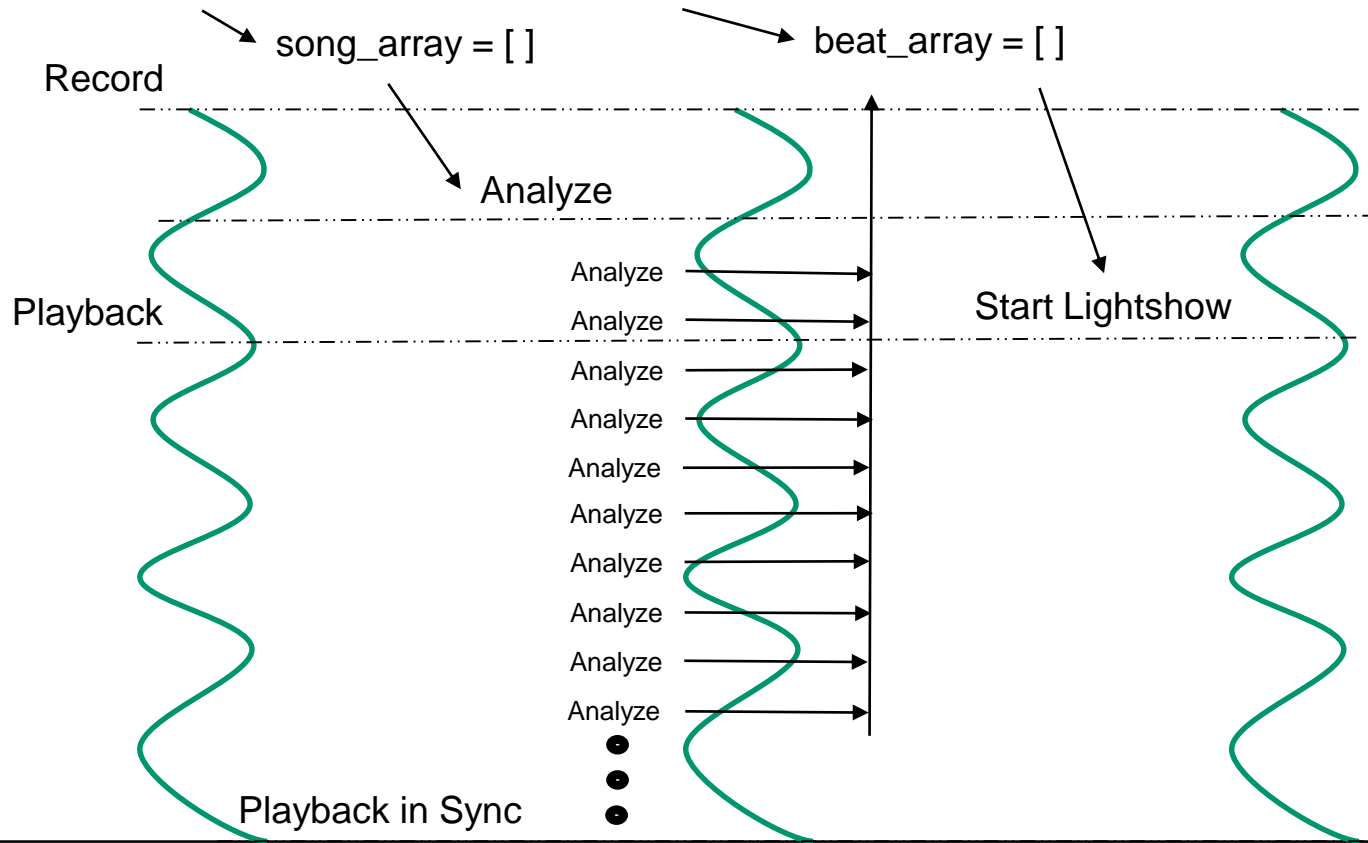


# Demonstration

# Live Music

# Analysis

# Lightshow



# Demonstration

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# Questions?

# Proposed CDR Deliverables

- Complete subsystems
  - Live stream functional
    - Auxiliary
    - Shairplay
  - Key Detection
- Integrate Systems
  - Coordinate live recording and analysis
  - Coordinate LED control with song playing
  - Additional webUI functionality
    - Couple lightshow modes
    - Buttons for specific colors