

POVs and Experience Prototypes

Amy Bearman, Kevin Coelho, Hieu Minh Pham

Problem Domain

Music Creation

&

Composition

Initial POV

Music is hard.

We want to make music easier.

Last week..

Julio felt embarrassed & not confident about his music skills

Mike doesn't have time to invest in learning music

Michael doesn't have resources to take his music to the next level

Additional Needfinding

Extreme Users

Jacob



17 y/old high school student

Loves video games and “vocaloid”
music

On the autism spectrum and has ADHD

Tried to teach himself piano

Jacob's Thoughts

Reading sheet music is hard, so are many apps.

“I was intimidated by the 88 keys on the piano until I realized that they repeat.”

Video games for music are not challenging enough. Less fun, more learning.

“High skill gap” from starting on music to continuing in music.

Jacob needs a way to learn music that is the right balance between fun and learning

Malcolm Campbell



Harvard / NEC

PhD in Neuroscience

Performed at Carnegie Hall,
Montreux Jazz Festival

Malcolm's Process

Gets peer reviews

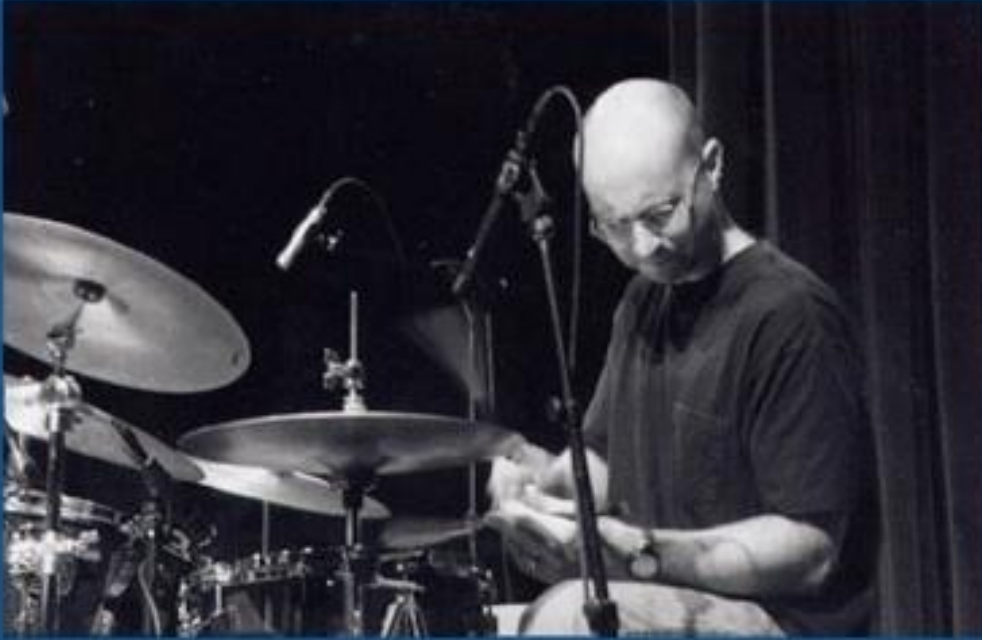
Prefers composing away from piano

Doesn't need playback software

Tends to overwork things

Malcolm needs an on-the-go tool to quickly jot down musical ideas.

Jason Lewis



BA in music from SJSU

30+ years performance
experience in Bay Area

Godfather 2 videogame,
Ratatouille

Jason's Process

Starts with strong idea / motif

Collaboration is important

Composition is a long process

Software playback is very important

Jason needs to accurately and quickly transcribe and play back his musical ideas.

Davorious Branimirius



Degrees in composition: BA from Graz, MA from Stuttgart, DMA @ Stanford

Studied with famous composers

Professional composer

Davorious' Process

Takes inspiration from nature & objects

Methodically charts ideas into structures

Translating ideas into specific notes is frustrating

Collaboration is important

Davorious needs a tool to translate theoretical ideas into musical notation

How might we..

How might we build a tool for composers to record their ideas?

How might we make playing music easy and fun?

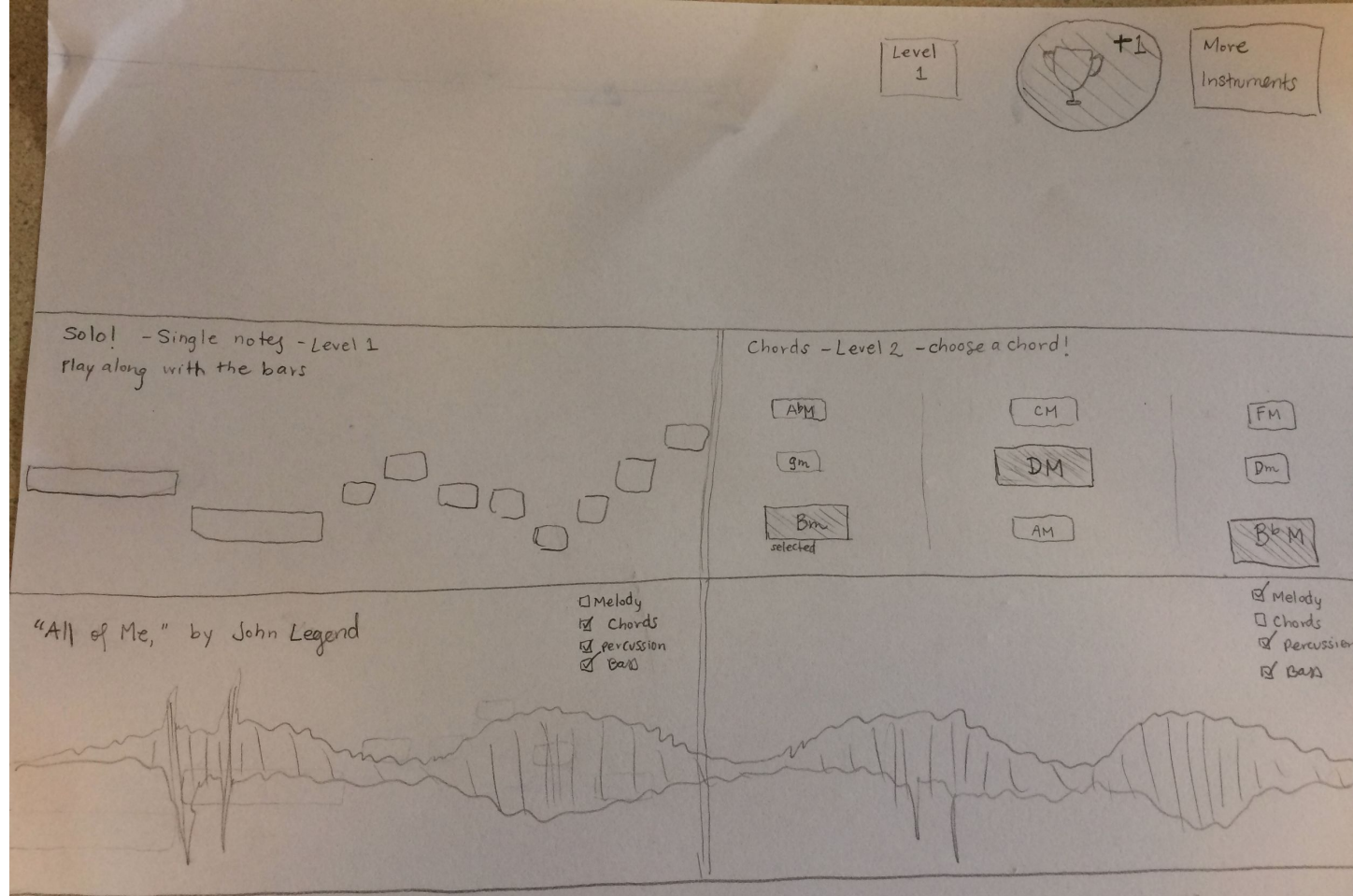
How might we visualize music other than traditional staff and notes?

Experience

Prototypes

Prototype 1

Jacob needs a way to learn music that is the right balance between fun and learning



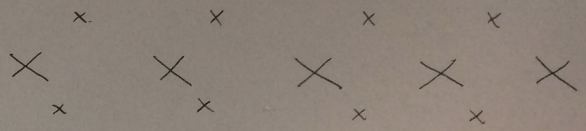
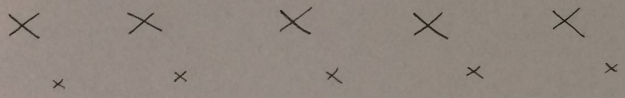
Level
3



More
Instruments

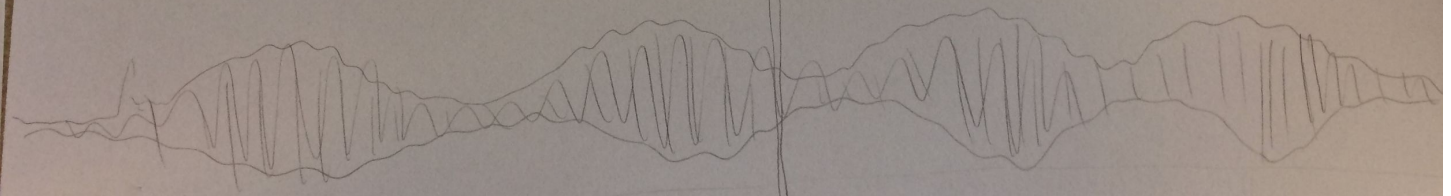
Guitar
Violin
Piano ✓

Percussion - Level 3 - Looping - Hit the beats you want to play



"All of Me", by John Legend

Melody Percussion
 Chords Bass



First level intuitive, people know Guitar Hero

Music symbols are confusing (chords + noteheads)

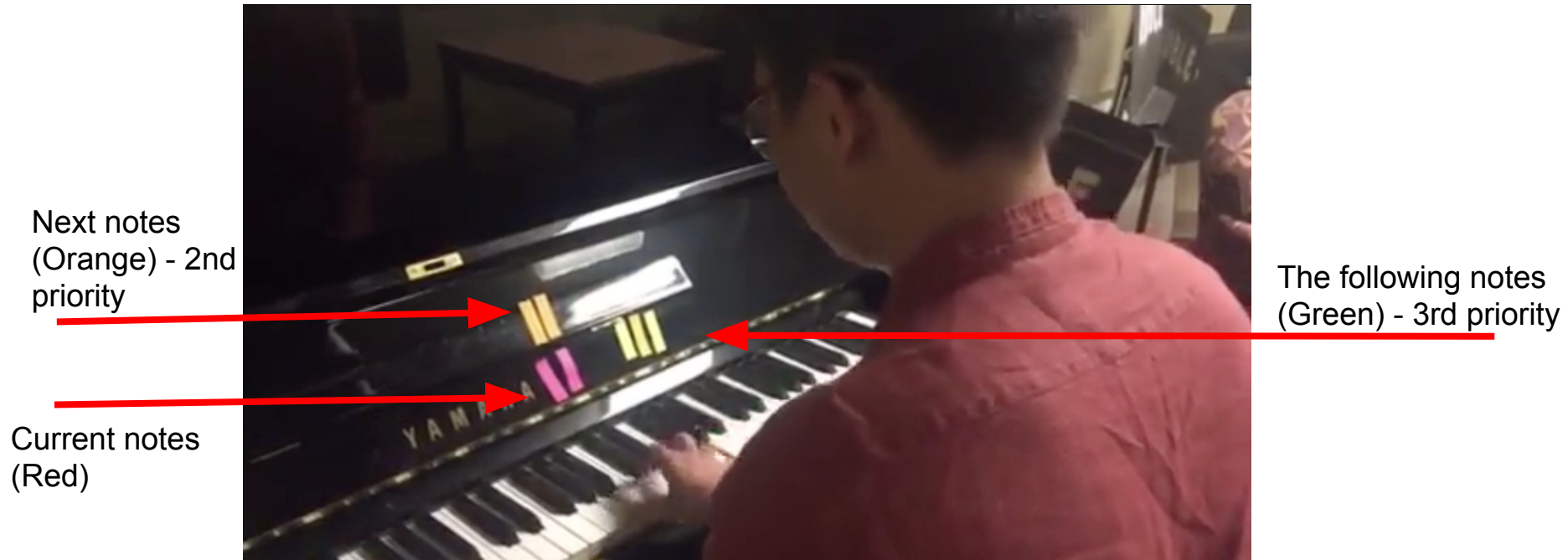
Color coding is good (like same notes in different octaves)

Assumption: prototype will help people learn music, valid: sort of

Skills may not transfer to real instruments, it's still a game

Prototype 2: AR Interface for playing music

Mike needs an easy and quick way to learn music.



Color coding helps recognize keys

Musician prefers sheet music, color blocks are slow. Not a serious tool.

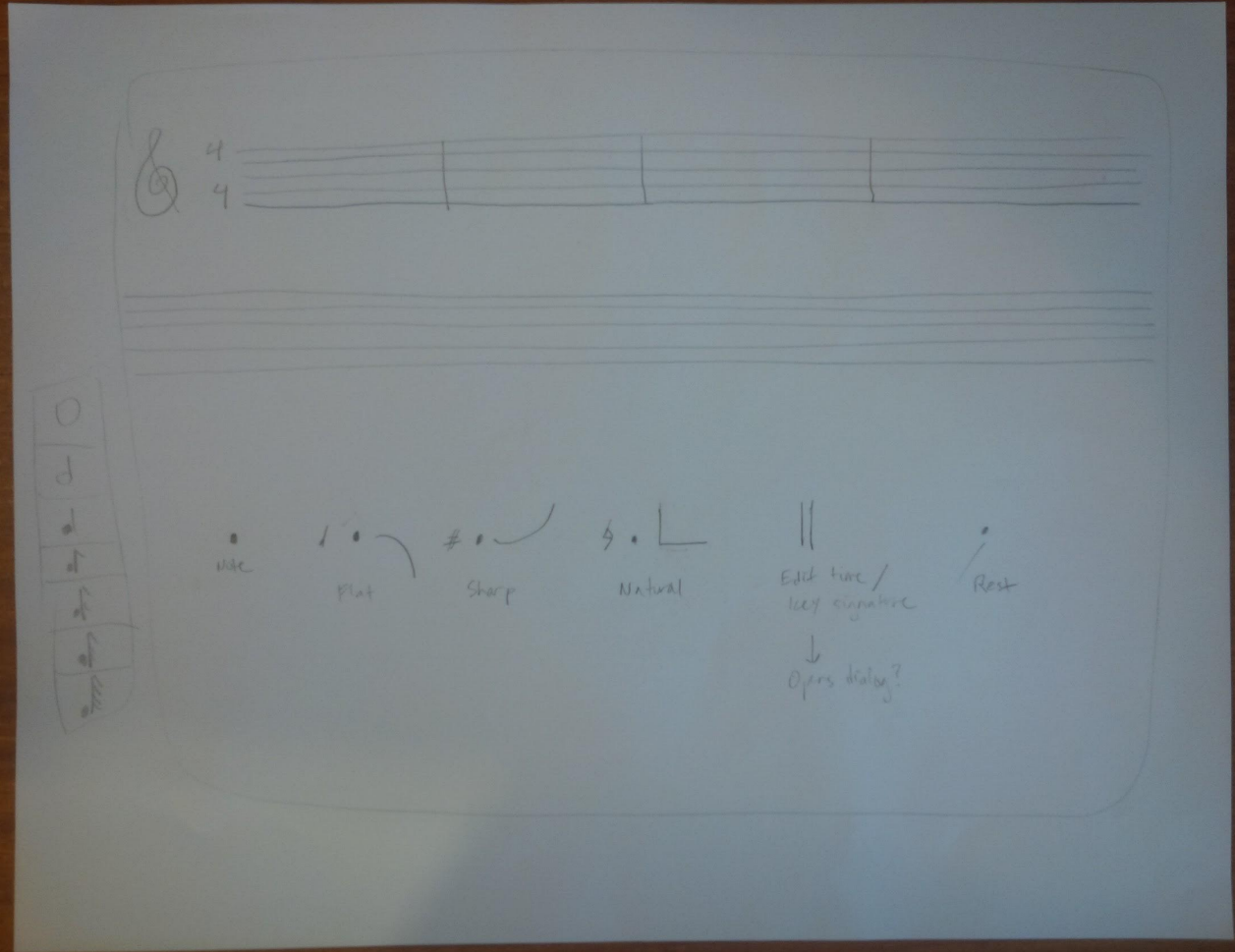
Fun to do (like guitar hero / tap tap)

Assumption: fun and easy to learn basic notes, valid.

Assumption: useful for musicians, invalid.

Prototype 3

Malcolm needs an on-the-go tool to quickly jot down musical ideas.





Very positive feedback about gestures

Needs a playback option

Will be difficult to implement larger scores / arrangements

Assumption: great for on-the-go ideas, valid.

Assumption: good for other things, invalid.