

# Bi-lingual Video Conferencing

ECE601 Placement Exam

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Kristi Perreault

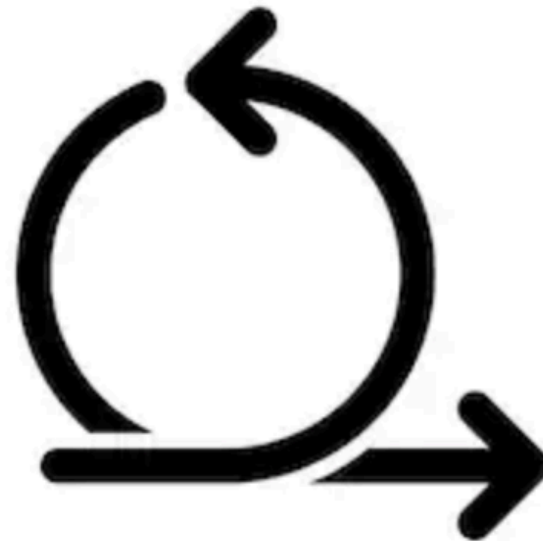
# Agenda

- Agile Tools
- Product Concept
- Option Analysis
- User Persona
- MVP & System Architecture
- Testing Strategy
- Challenges
- Future Releases
- Retrospective
- Questions
- Appendix



# Agile Tools

- Kanban Board
  - To-do, In Progress, Done
- Story Writing
  - “As a...I want...so that...”
  - Acceptance criteria
- Sprint planning & backlog
- Daily standup
- Retrospective



# Product Concept

- Rapid growth in communication
- Video chat supports multiple languages
- Real time audio translation
- Opportunities
  - Working remote
  - Long distance relationships
  - Travel



# User Persona



## Derek | HR Recruiter

Age: 31

Gender: Male

Status: Single

Location: New York, NY

Language: English

Tier: Skeptic

### Bio

Derek is employed at a company based in Barcelona, Spain. He works as a recruiter in their NYC office and spends most of his day on the phone, interviewing candidates.

### Hobbies

- Cooking
- Marathon Running
- Dog walking

### Goals & Aspirations

- Working on a promotion to HR manager
- Would like to hire 10 more employees by the end of the year
- Wants to be fluent in Spanish to help in job progression

### Frustrations

- Working across the different time zones
- Not being able to speak another language fluently
- Lagging video chats in interviews

# Option Analysis

## ■ Microsoft Azure

- Skype Bi-lingual Video Conferencing
- Microsoft Translate
- Microsoft Cognitive Services



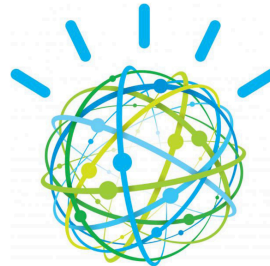
## ■ Google Cloud

- Google Hangouts
- Google Translate



## ■ IBM Watson

- Natural Language
- Text/Speech



## ■ Amazon Web Services

- Amazon Transcribe
- Amazon Translate
- Amazon Polly



# Minimal Viable Product (MVP)

- Video conferencing capability

- Place and receive calls
- Video feed present



- Basic user interface

- Dial, call, hang up
- Adjust volume
- Set language

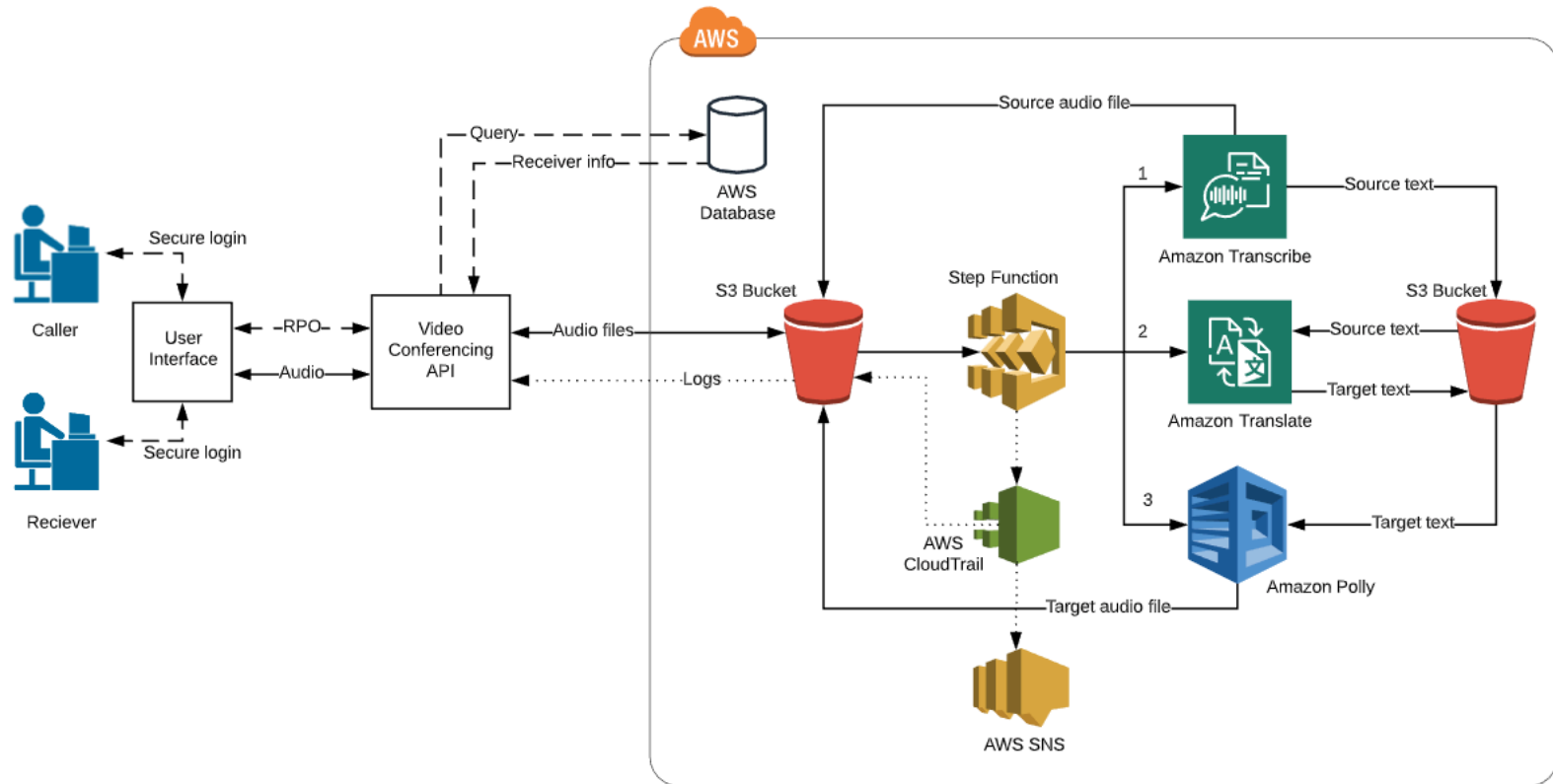


- Language translation

- English and Spanish
- Audio to text in real time
- Cloud services



# System Architecture





# Testing Strategy

- Manual testing
- Unit testing
- End to end testing
- User testing
- Logging
- AWS Console
- Validation service



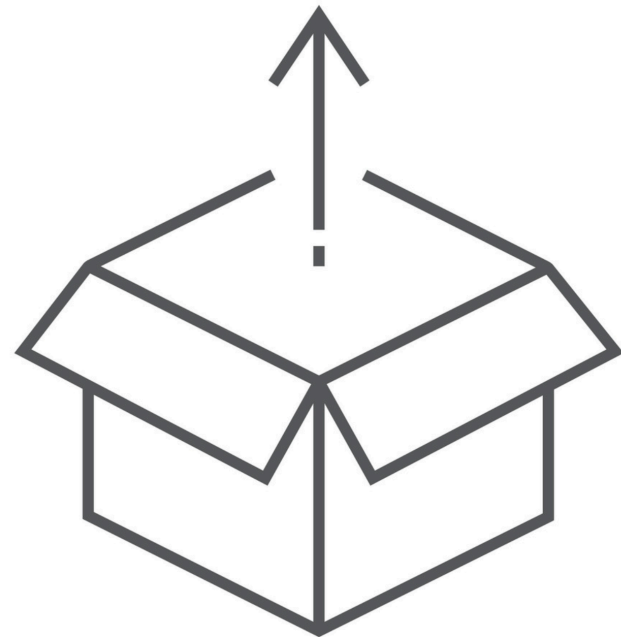
# Challenges

- Video Quality
  - Latency
  - Video feed
- Real-time translation
  - Multiple services
  - Processing power
- Storage
  - Audio & text files
- Price
  - “Pay as you go”
  - Cost per service



# Future Releases

- **Release Two**
  - Translate to and from another language
  - Translated audio playback
  - User profiles
- **Release Three**
  - Translate to and from a fourth language
  - Ability to select voice type
  - Chat window



# Sprint Retrospective

## What went well?

- Defining stories first
- Use of GitHub
- Division of work
- Working on research, report, presentation at the same time
- Utilizing wiki pages to organize thoughts

## What didn't go well?

- Kanban Board
- System diagram
- Including more technical information

## What to do differently?

- Story pointing
- More research
- Compare/contrast of cloud providers
- Complete product roadmap

Questions?

# Appendix

- GitHub Link
  - <https://github.com/kristiperreault/ece601-placement-exam>
- Kanban Board
  - <https://github.com/kristiperreault/ece601-placement-exam/projects/1>
- Wiki space
  - <https://github.com/kristiperreault/ece601-placement-exam/wiki>
- Email
  - [kristip@bu.edu](mailto:kristip@bu.edu)