



# INTRODUCING THE OPEN VOICE INTEROPERABILITY SANDBOX

THURSDAY, FEBRUARY 8, 2024 | 1900 EET / 1800 CET / 1200 EST / 0900 PST



Deborah Dahl  
Open Voice Interoperability Initiative



Emmett Coin  
ejTalk



Diego Gosmar  
XCALLY



Leah Barnes  
Open Voice Interoperability Initiative



**2024.2.8**

**Is subject to the guidelines  
of the Linux Foundation  
Anti Trust Policy**



**will  
begin and end  
at its scheduled time.**



**Is being recorded.  
The recording will be stored in  
the Google Workspace  
shared drive.**



# Welcome!

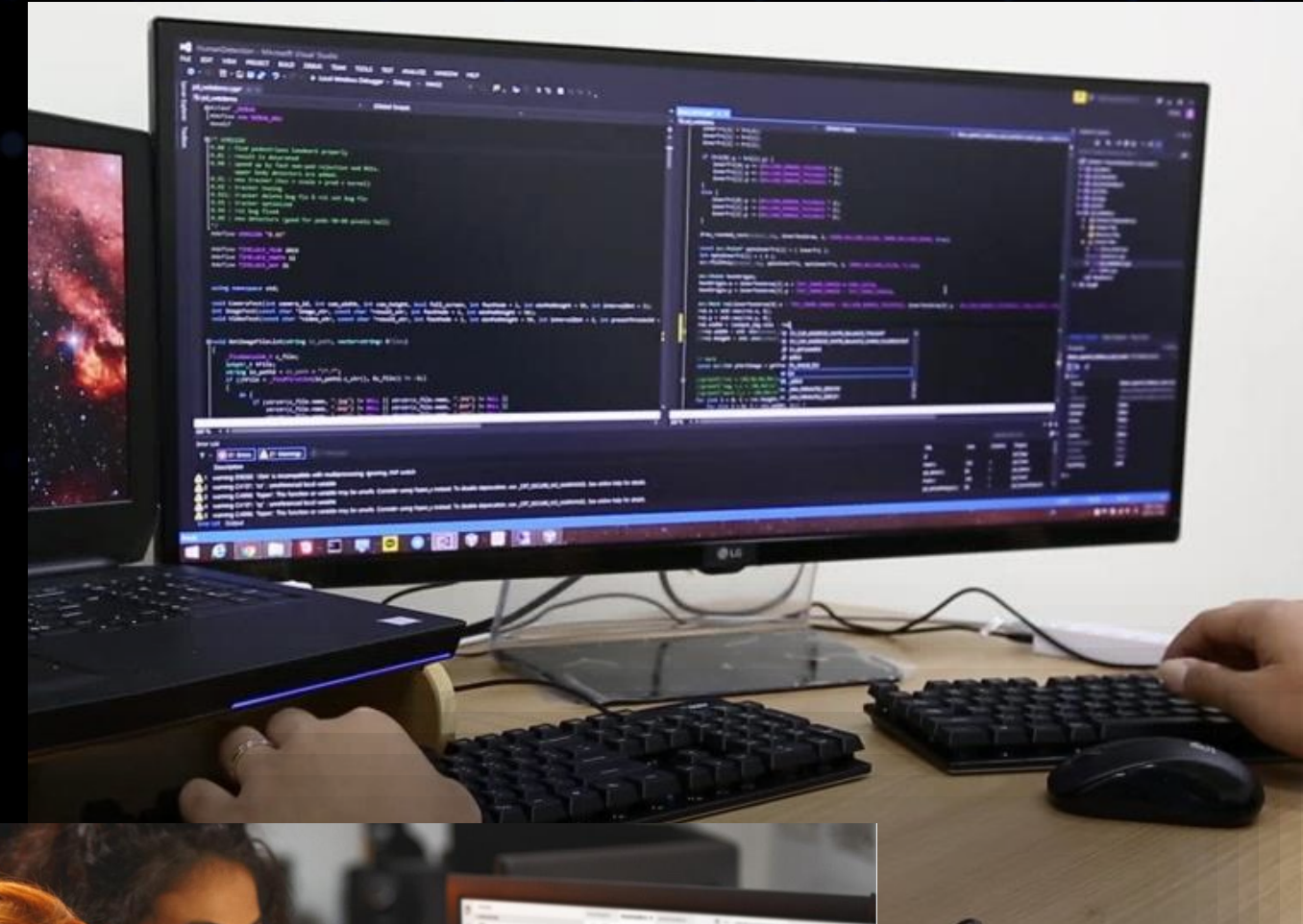


- The Open Voice Interoperability Initiative is a project of the LF AI & Data Foundation, extending the Open Voice Network
- It enables independent conversational assistants
  - based on diverse platforms
  - to collaborate to solve problems for users
- We're developing standard specifications for inter-assistant communication
  - The Dialog Events specification
  - The Conversational Envelope



# The Sandbox

- Gets developers started with the specifications
- Open-source Python and Javascript in GitHub
- Today's webinar is an introduction to the sandbox
- There are two initial third-party implementations that have been integrated with the sandbox, from XCALLY and ManMadeWeb
- We'll be hearing about the XCALLY implementation today



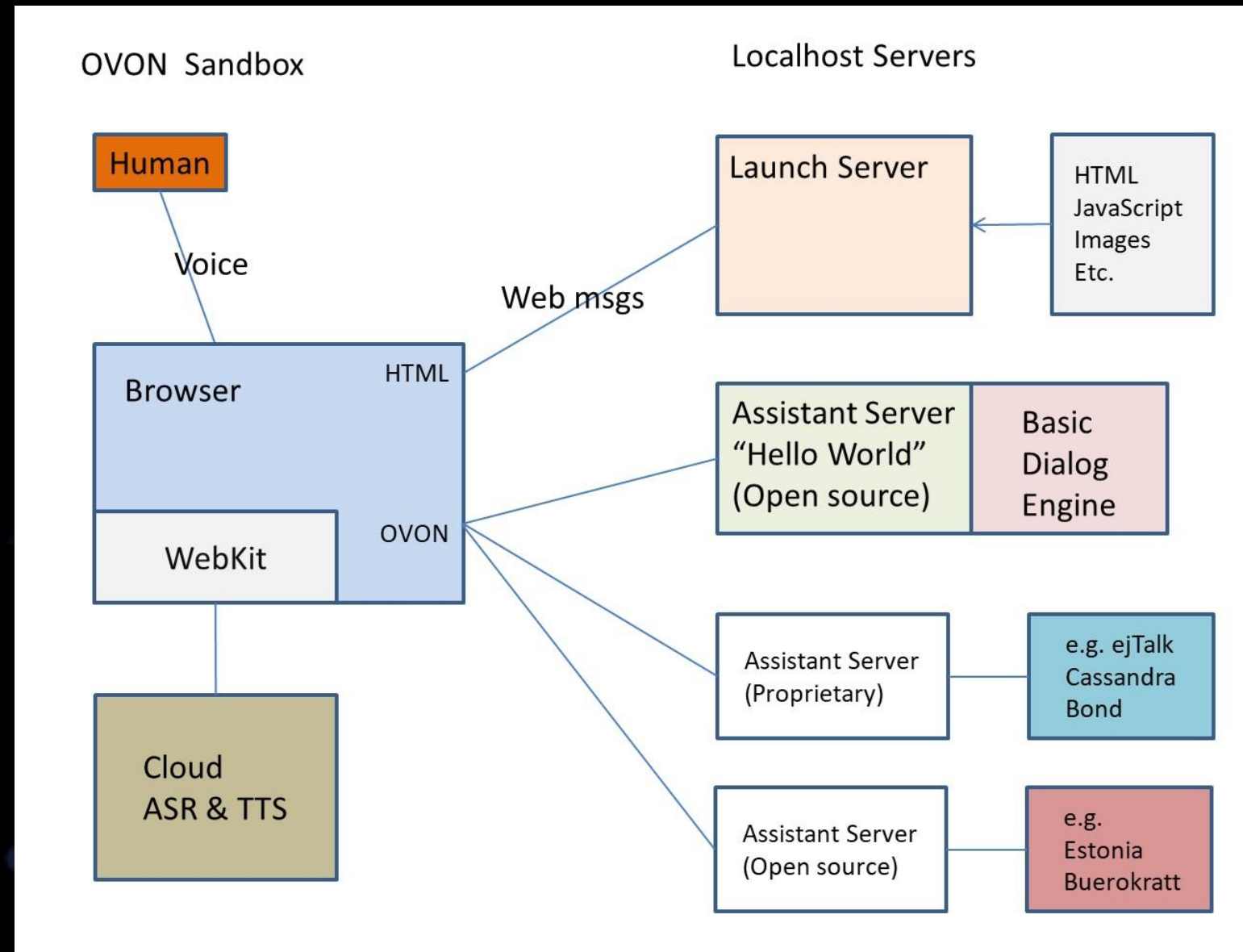
# Agenda

- Emmett Coin, Senior Sandbox Developer: Introduction to the sandbox, its components and how it works
- Emmett Coin and Leah Barnes, Junior Sandbox Developer: Demonstration
- Diego Gosmar, XCALLY: Example of using the sandbox with an external assistant -- Smart Library
- Emmett Coin: logistics – using the sandbox and documentation
- All: Q&A
- Please put your questions and comments in the chat, and we'll address them in the Q&A session at the end



## Sandbox Introduction: Some Concepts

- **Assistants:**
  - Voice based, natural language, offer (specific) services
- **Interoperability:**
  - Multiple Assistants helping solve (cross domain) problems
- **Standard:**
  - Assistants need to speak the same (computer protocol) language
- **Web-like:**
  - Common formalism to cooperate (across and between) assistants
- **Sandbox...Why**
  - To learn, demonstrate and explain (interoperability)
- **A Tool**
  - **Experiment and test all this using the actual standard**

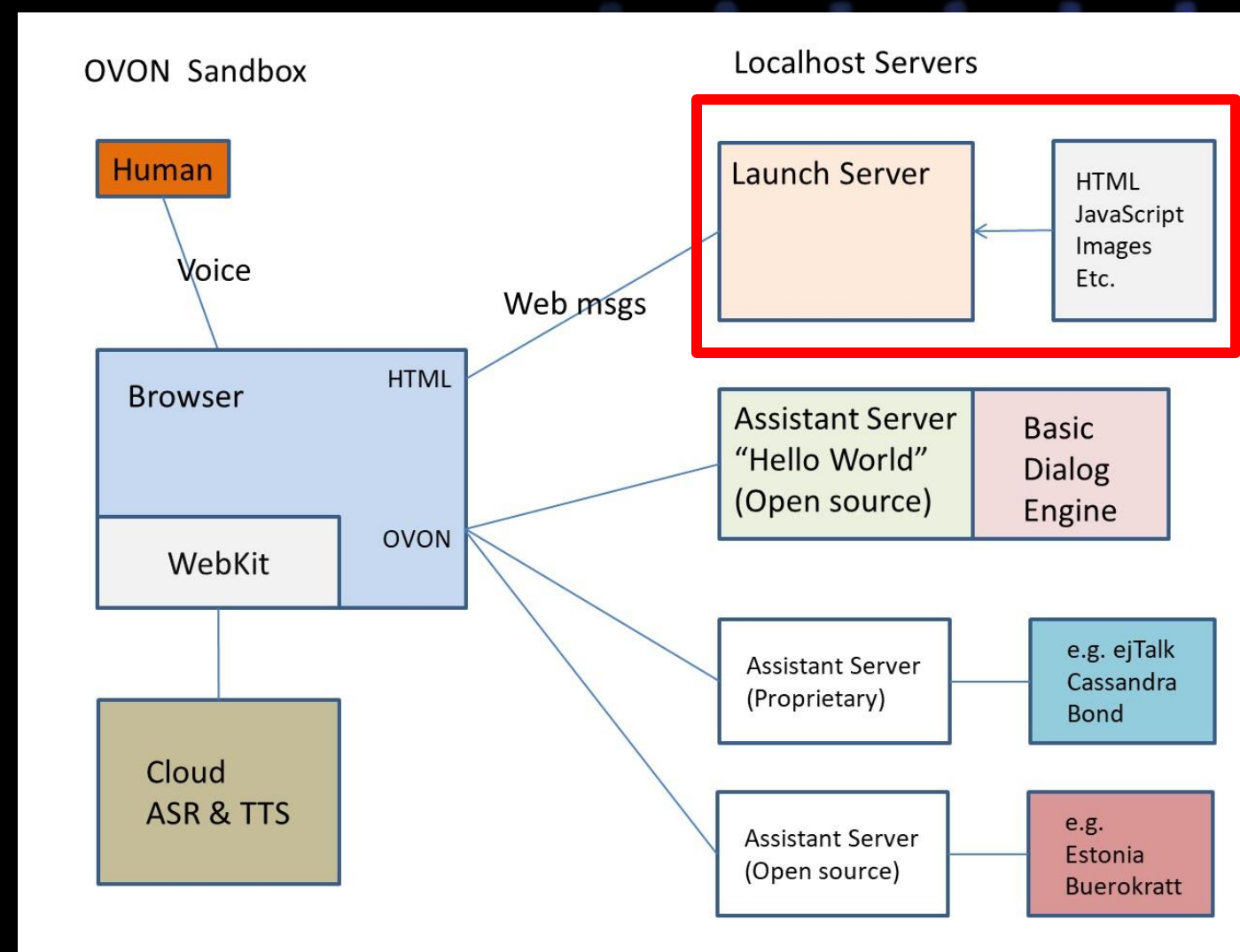


## Sandbox Component

It all starts with the Launch Server

- Python (small *very* simple) server
- Root directory is the root of the downloaded project
- Loads HTML/JavaScript/image resources
- Manages files (logs, seqDiagrams, assistant list, etc.)

## INTEROPERABILITY WEBINAR



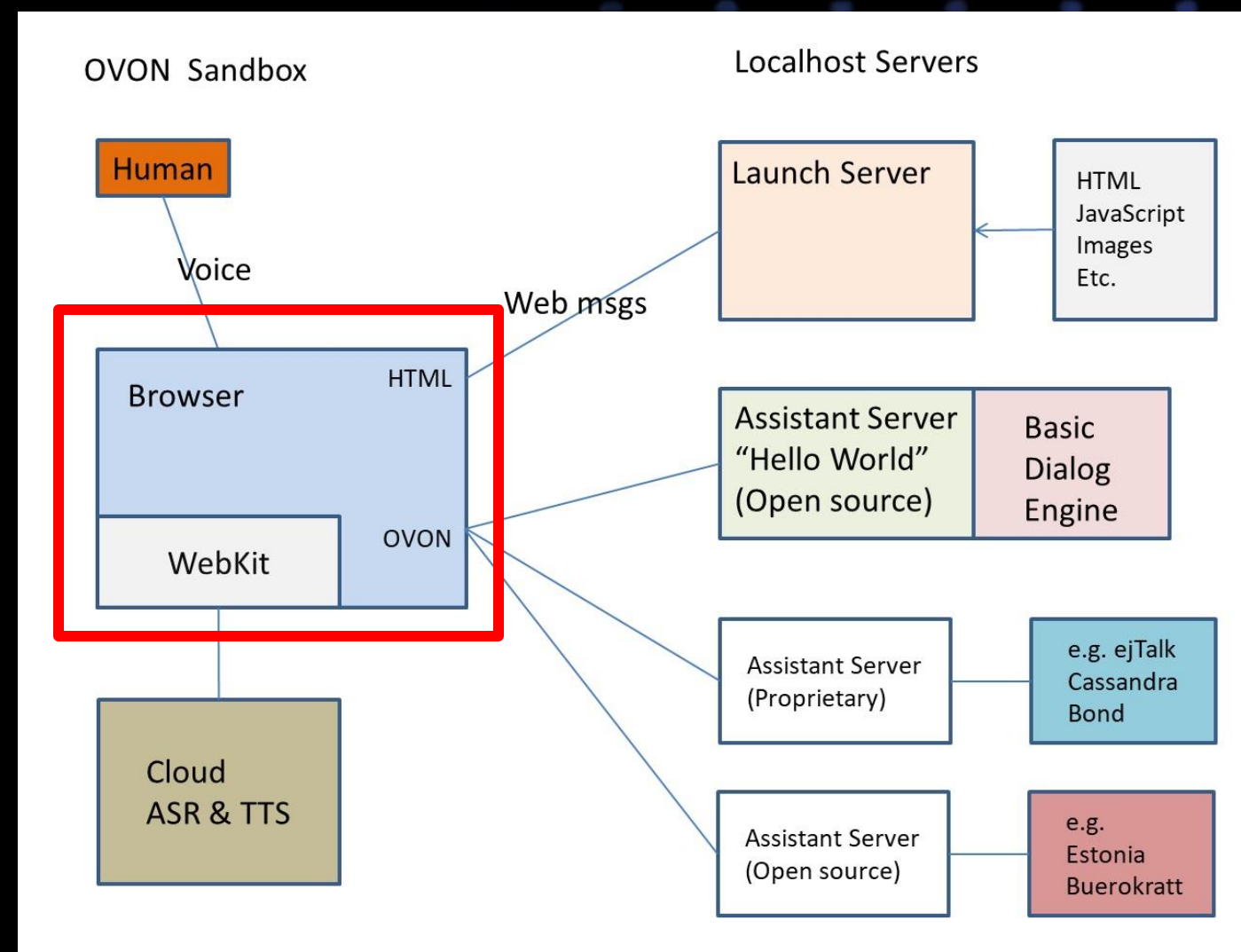


## Sandbox Component

An ordinary browser supports actions

- Human interaction with OVON Assistants
- Speech technologies
- SVG diagram displays

## INTEROPERABILITY WEBINAR

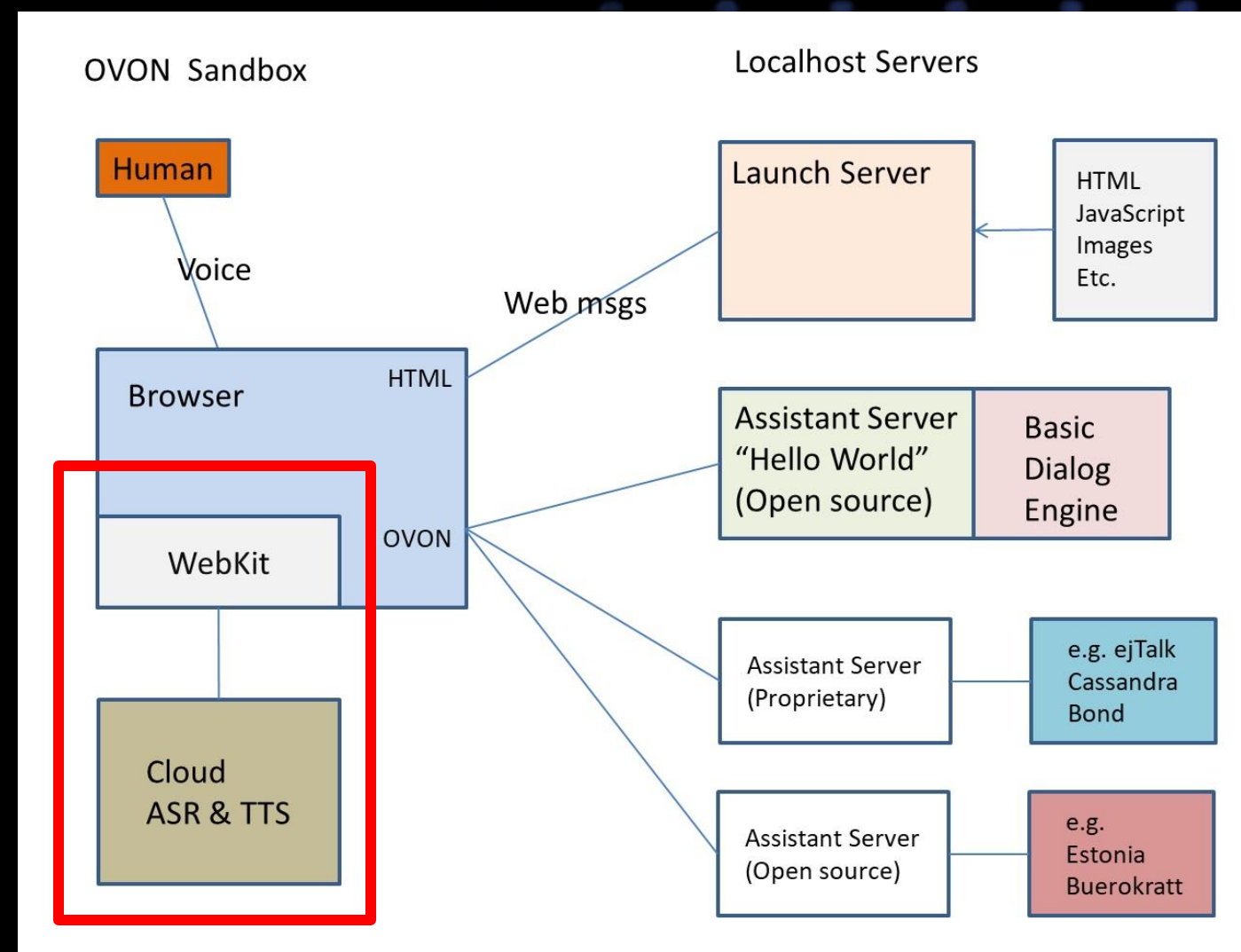


## Sandbox Component

WebKit Speech is run via the browser

- Standard server based (free) **ASR** and **TTS**
- Works in some browsers (**Edge**, **Chrome**)
- Very **good** performance

## INTEROPERABILITY WEBINAR





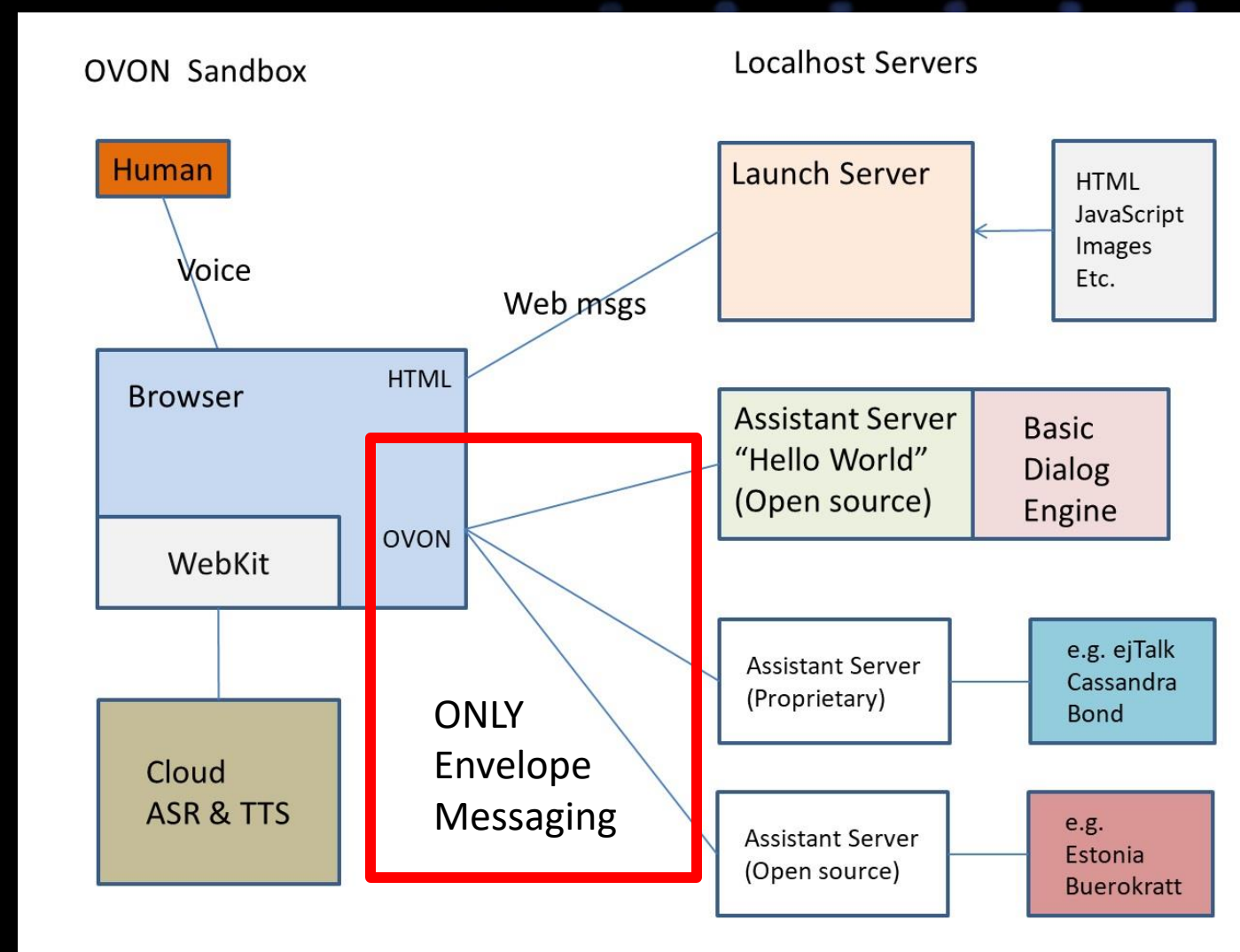
## Sandbox Component

Communication is solely via Envelopes

Envelopes exchange:

- Utterances (human and assistant)
- Participant IDs and URIs/URLs
- Conversation ID (plus all expected times, etc.)
- Context and History (soon)

## INTEROPERABILITY WEBINAR

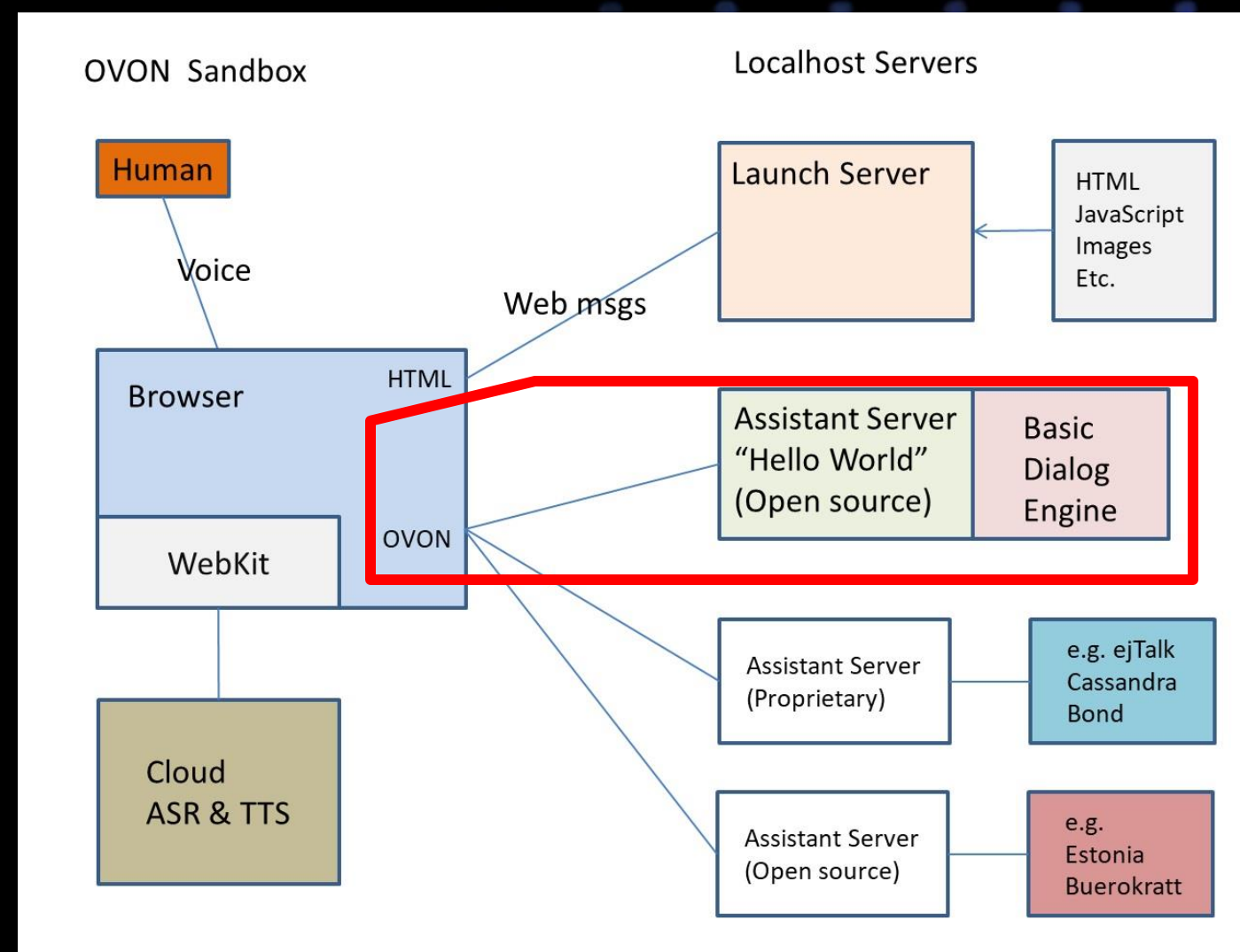


## Sandbox Component

Envelopes are channeled via Sandbox

- It all starts with human **initiating** an assistant
- It continues with **turn taking**
- Assistants may **“invite”** other assistants (soon)
- New assistants may be **“discovered”** (soon)

## INTEROPERABILITY WEBINAR





# OVON Sandbox 3<sup>rd</sup> party Smart Library Service Integration



## SMART Library Agents



Smart Library  
conversational  
assistant

*OVON POST Request  
Utterance + Whisper,*

*OVON POST  
Response  
BOOK information  
OVON Messages*

**utterance:** Can I have some info about Harry Potter and the and the philosopher's stone?

**whisper:** In particular can I get some info about the second edition of the book?

*The second edition of the book was published in 1999 by Bloomsbury Publishing in the UK and Scholastic Inc. In the US. The main difference between the first and second editions is the cover design. The first edition featured a simple design with the title and author's name in gold letters against a black background. The second edition, on the other hand,...*



Primary  
conversational  
assistant  
(Sandbox  
internal)



# Example OVON REQUEST UTTERANCE & WHISPER

*To be sent as part of the body of an  
HTTPS POST request to the  
endpoint:  
<https://ovon.xcally.com/smartlibrary>*

**Replace values with your desired  
questions about books:**

**utterance:** main request

**whisper:** additional info you'd like  
to send/request

conversational AI worthy of user trust

Formatted according to the:  
Conversational Envelope and Dialog Event specs

```
"ovon": {  
  "schema": {  
    "version": "0.9.0",  
    ...  
  }  
  "eventType": "invite",  
  "parameters": {  
    "to": {  
      "url": "https://ovon.xcally.com"  
    }  
  }  
  ...  
  {  
    "eventType": "utterance",  
    "parameters": {  
      ...  
      "mimeType": "text/plain",  
      "tokens": [ { "value": "Can I have some info about  
Harry Potter and the and the philosopher's stone?" } ]  
    }  
  }  
  ...  
  {  
    "eventType": "whisper",  
    "parameters": {  
      ...  
      "features": {  
        "text": {  
          "mimeType": "text/plain",  
          "tokens": [ { "value": "In particular can I get some info  
about the second edition of the book?" } ]  
        }  
      }  
    }  
  }  
  ...  
}
```



## Sandbox - Sequence Diagram

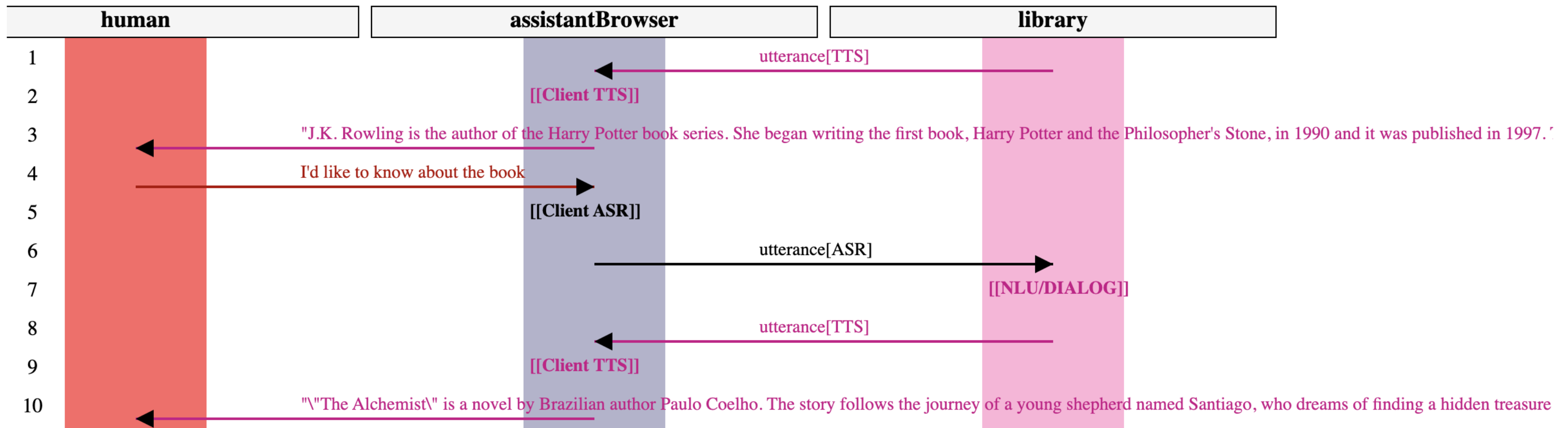
Browser: **chrome** OS: **Mac OS**

REFRESH

Save Diagram

Select File:

CLEAR







#111 Diego\_OVON

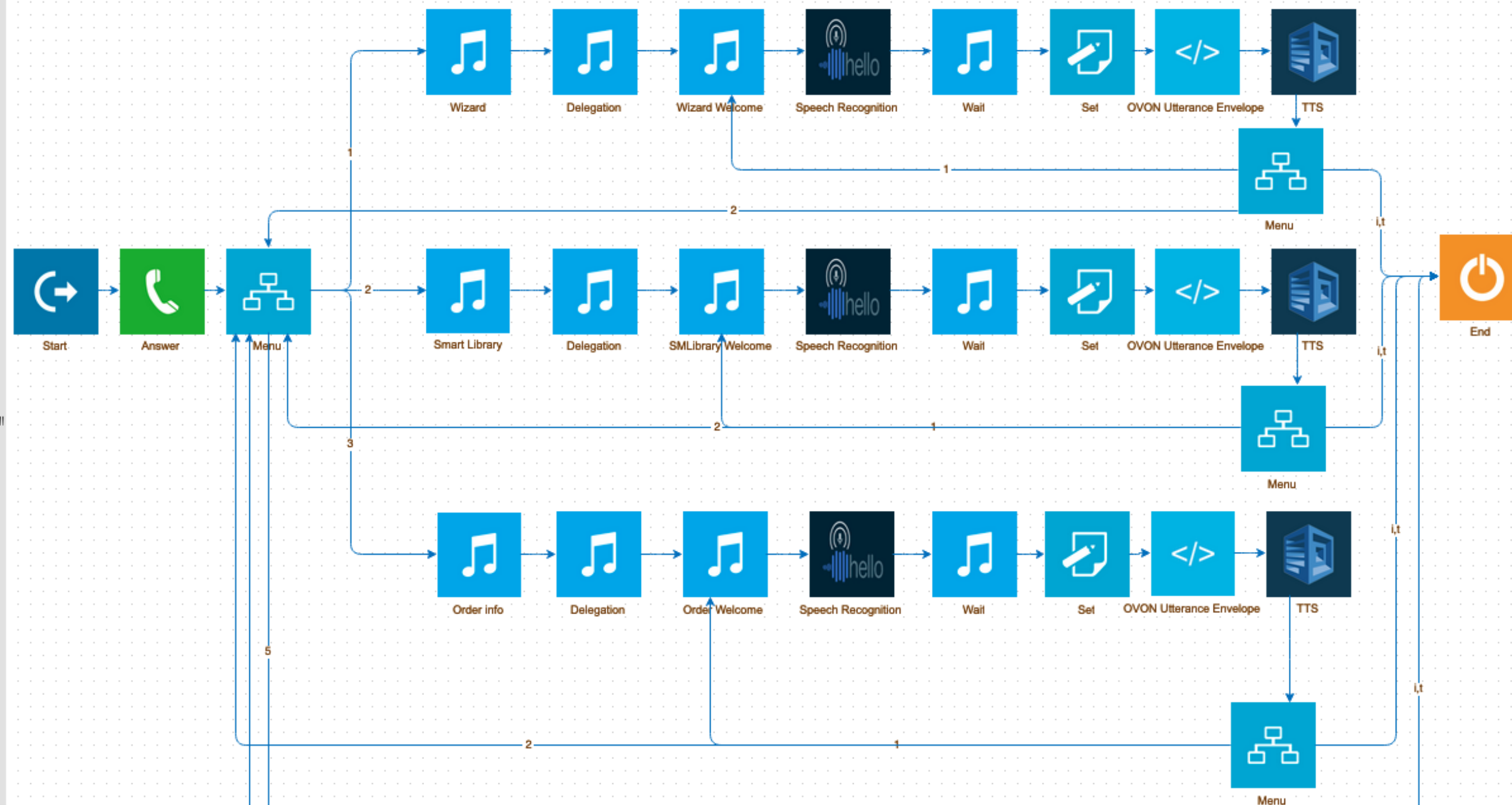
interoperability convAI agents (DO NOT touch please) - Created At 12/01/24 11:53:46

File Edit View Format Text Arrange Help



Search Shapes

- Entry
- Call Management
- Agent Management
- Variable
- Playback
- Recording
- TTS
- ASR
- Integration Server
- Callflow
- Stats
- General







# Questions

## Resources

- Introduction to the LF AI and Data Interoperability Initiative  
<https://openvoicenetwork.org/interoperability-initiative/>
- LF AI & Data Foundation  
<https://lfaidata.foundation/>
- Interoperability Github  
<https://github.com/open-voice-interoperability>
- Specifications  
<https://github.com/open-voice-interoperability/docs/tree/main/specifications>
- Code  
<https://github.com/open-voice-interoperability/sandbox>
- Open Voice Discord
  - <https://discord.gg/QGKaUBrm>



## Previous Webinars

March 22, 2023

***Interoperability Protocols for Conversational Assistants***

<https://www.youtube.com/watch?v=BCxsDAPYjzY&t=15s>

June 15, 2023

***Dialog Events - Negotiation and Delegation Protocols for Collaborating Conversational Assistants***

<https://www.youtube.com/watch?v=UfxVqlgsWo8&pp=ygUSb3BlbiB2b2ljZSBuZXR3b3Jr>

September 20, 2023

***The Conversational Envelope: A Universal API for Conversational Assistants***

<https://www.youtube.com/watch?v=19FsUa72ojk&t=2s>

# Next steps

- We'll respond to any questions that we didn't get to today offline in GitHub discussions
- You can direct future questions to GitHub and Discord
- Join us!
  - Try out the sandbox
  - Help us work on the specifications



**Thank You!**