

Universal Namespace

Interoperability Protocol for Generative AI

PROBLEM

Generative AI will turn into a war of language models

ars TECHNICA

BIZ & IT TECH SCIENCE POLICY CARS GAMING & CU

ADVENTURES IN 21ST-CENTURY HACKING —

AI-powered Bing Chat spills its secrets via prompt injection attack

By asking "Sydney" to ignore previous instructions, it reveals its original directives.

BENJ EDWARDS - 2/10/2023, 2:11 PM

Forbes

FORBES > INNOVATION > AI

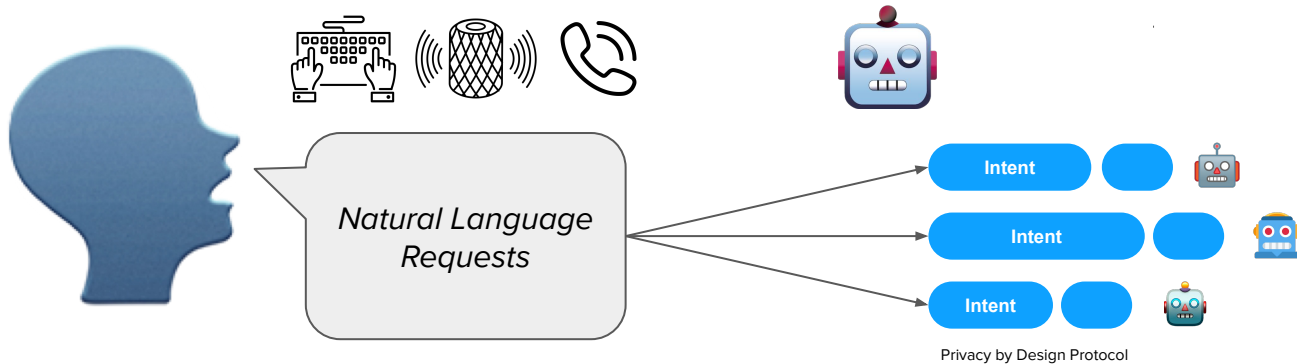
AI Ethics And The Future Of Where Large Language Models Are Heading

SOLUTION

We enable companies to resell user requests

Companies that process language data

can resell it with a privacy-by-design protocol for intent

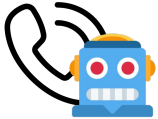


Benefit of the universal language: 1 voice command can be traded to multiple AI as

Intent

PRODUCT

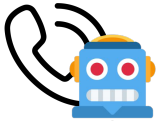
Add-on for existing AIs



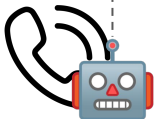
Thanks for your booking at Marriott.
Can I help you with anything else?



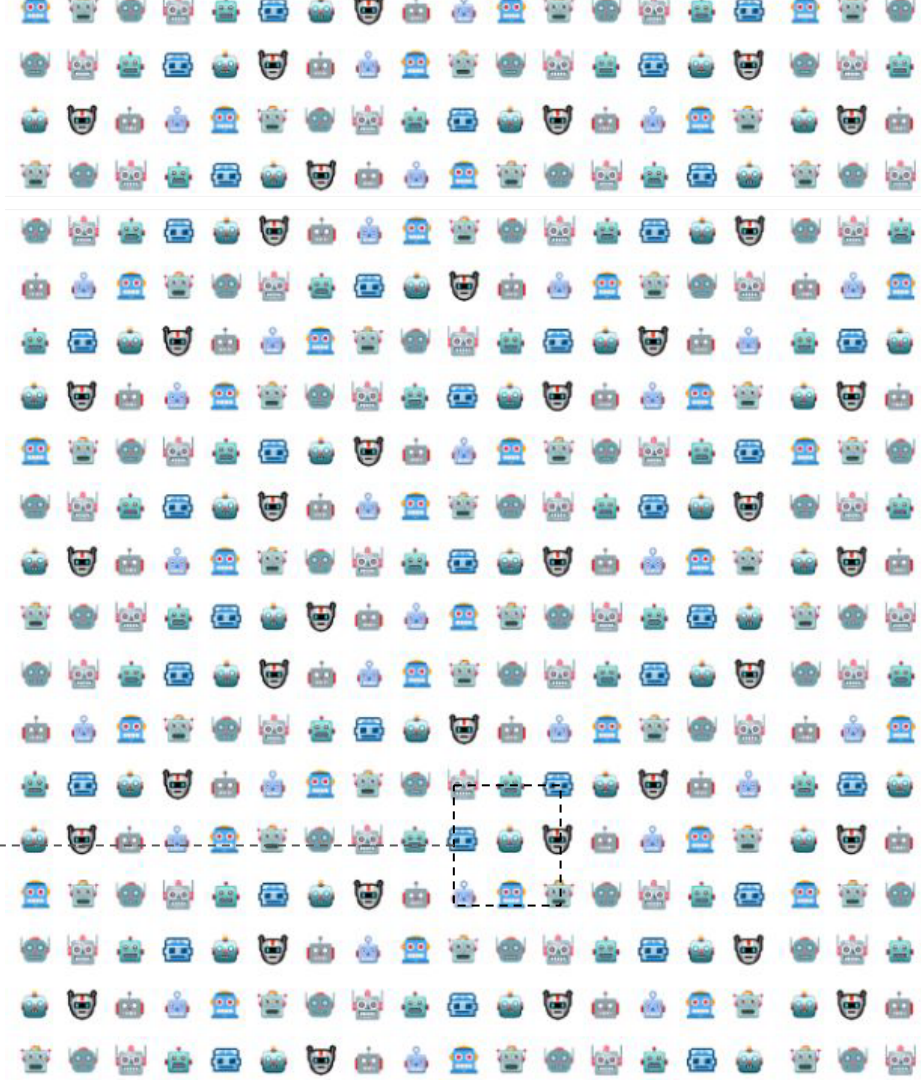
Yes, I plan to go to Hamilton on
Broadway. Afterwards, we need a
good dinner for not more than 120\$.



Ok, I will see what I can do for you.
You will now be connect to another AI.

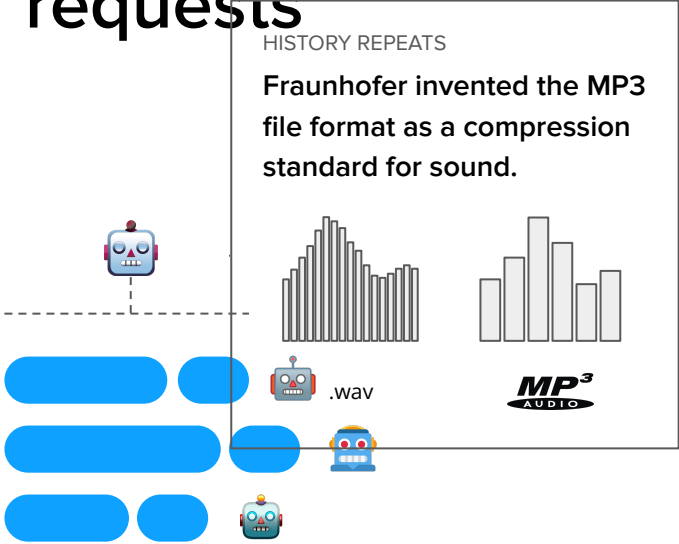
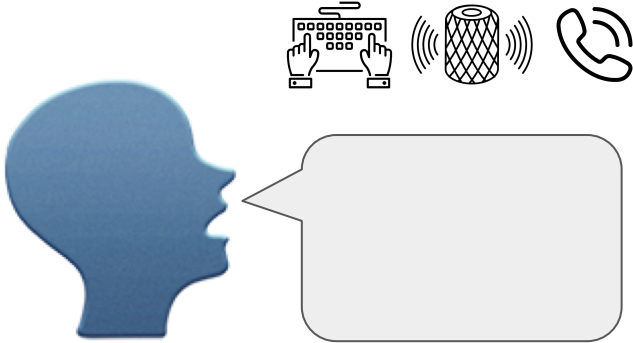


Hey, the Marriott AI just told me you
want to..



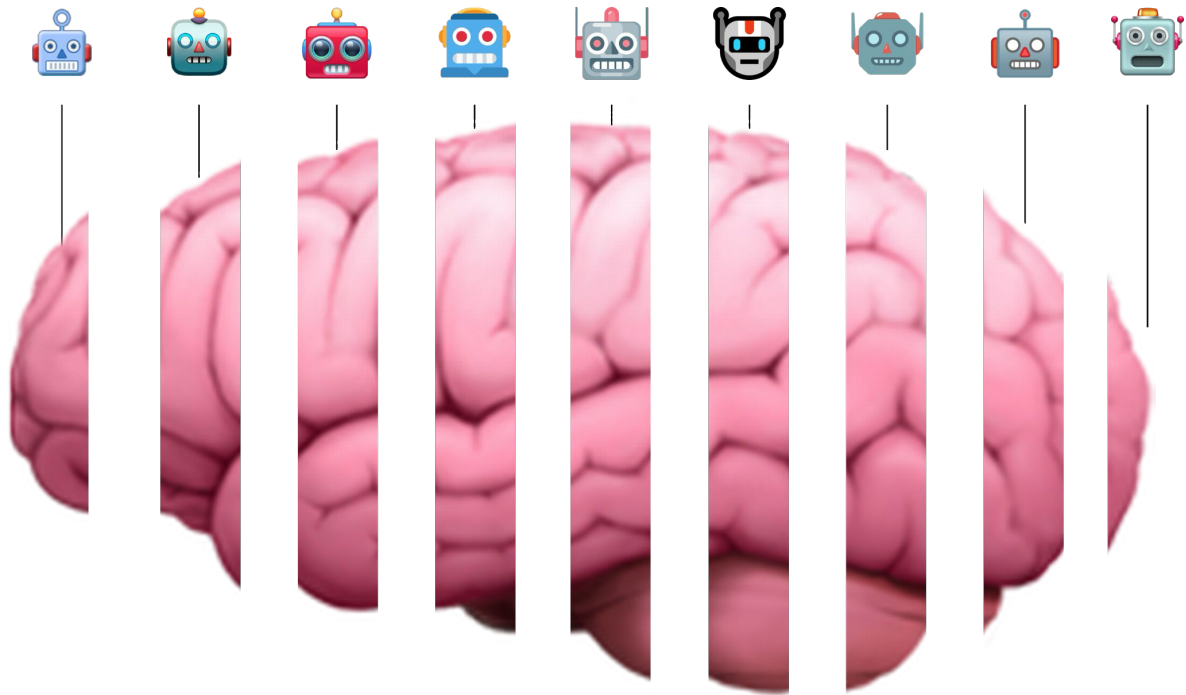
PRODUCT

We enable companies to resell user requests

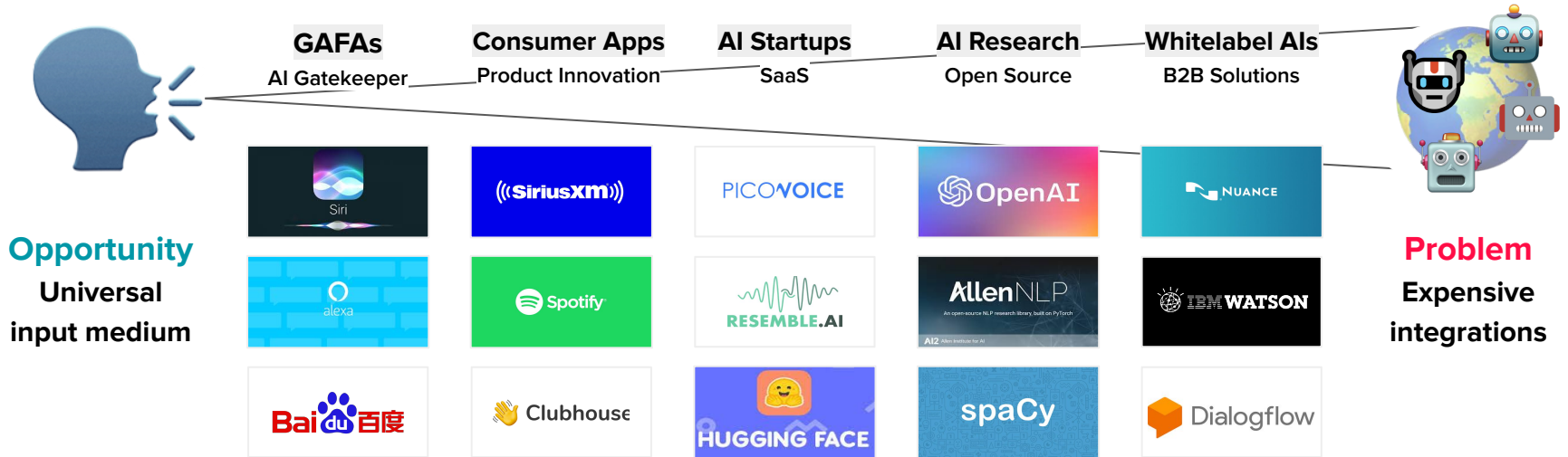


PROBLEM

Generative AIs are niche intelligent - we



Voice AI is a \$ 55 billion e-commerce market by 2025. >50 % of online search will be voice commands. Today's AIs are however only niche intelligent. Worldwide more 1000+ vendors compete. Integrations are risky: Use case and language AI leaders change constantly.



Regulators start demanding privacy by design voice AI implementations. Industry alliances try to corner the market - so far only with moderate success. They all share the same problem: Every AI interprets language differently. Voice assistants can't be easily combined.

Industry Alliances



October 2019
Amazon launches Voice Interoperability Initiative - without Google, Apple or Samsung

<https://www.zdnet.com/article/amazon-launches-voice-interoperability-initiative-without-google-apple-or-samsung/>

Regulatory Interventions



May 2021
EU requires companies to protect biometric information of consumers including all voice AI data

https://ec.europa.eu/commission/presscorner/detail/en/OANDA_21_1683



May 2021
Smart (CA) TVs Are Listening: California Assembly Passes Voice Recognition Device Bill Headed to Senate

<https://www.aflawaccess.com/2021/05/articles/smart-tv-are-listening-california-assembly-passes-voice-recognition-device-bill-headed-to-senate/>

Language Bias



May 2021
Hey Alexa, Why Don't You Speak Hebrew? One of the oldest world languages has a too small market for AI

<https://www.haaretz.com/israel-news/tech-news/prim-jum-hev-siri-why-dont-t-you-speak-hebrew-1.9190013>

Open Source



Sep 2020
GPT-3 - The Next Big Breakthrough in AI Will Be Around Language

<https://www.haaretz.com/israel-news/tech-news/prim-jum-hev-siri-why-dont-t-you-speak-hebrew-1.9190013>



To make voice AIs interoperable we develop a standardized language to encode user requests. This way a single voice command can be dispatched to multiple voice assistants and be processed in a privacy by design protocol for intent.



Hey AI, I need to travel from Berlin to Hamburg tomorrow. Can you find me somebody to share a ride with? And please get me Hotel. Make sure they have a gym!



Language-based requests containing multiple intents



RIDESHARE

Berlin

Hamburg

1 Person

2021/05/01

WHO ELSE?



HOTEL

Hamburg

1 Person

2021/05/01

2021/05/03

Gym

WHO ELSE?

Protocol encoding & AI look up

Our APIs are used to connect AIs to other voice AIs

User request

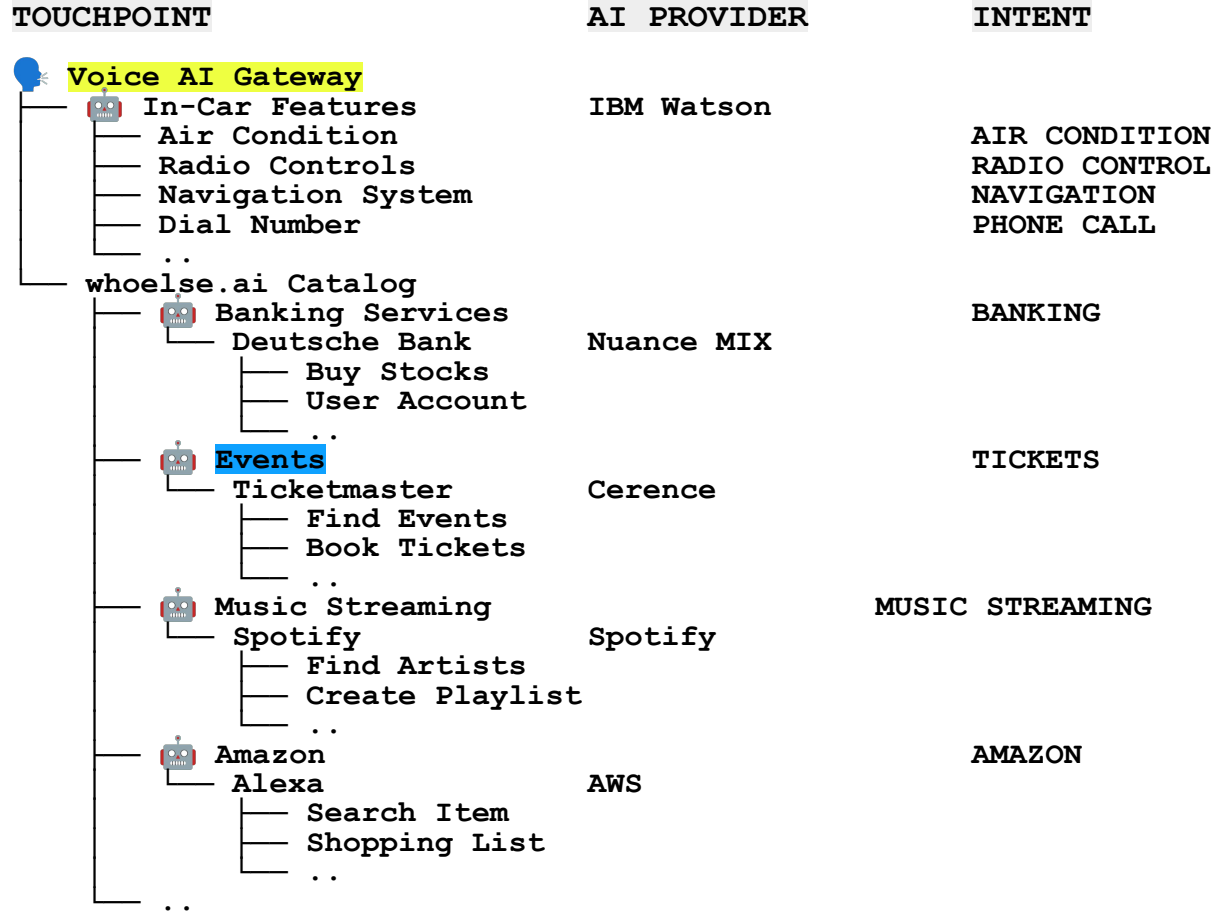
“Assistant, I want to go out dancing. Find me nearby concerts!”

Gateway AI

“Sorry, I don’t know how to book concert tickets. I will now connect you to the best voice assistant available.”

Expert AI

“Welcome at Ticketmaster. Please tell me which event interests you.”



We launched the project by initiating an **ISO-compatible standard for NLP API interoperability: DIN SPEC 2343** was published in September 2020.¹⁾ Industry partners now start using this standard as a purchasing requirement to reduce risks integrating voice AIs.

DIN SPEC 2343 Standard Specification

Required parameter

```
{
  "Timestamp": "string",
  "RequestId": "string",
  "Intent": "object",
```

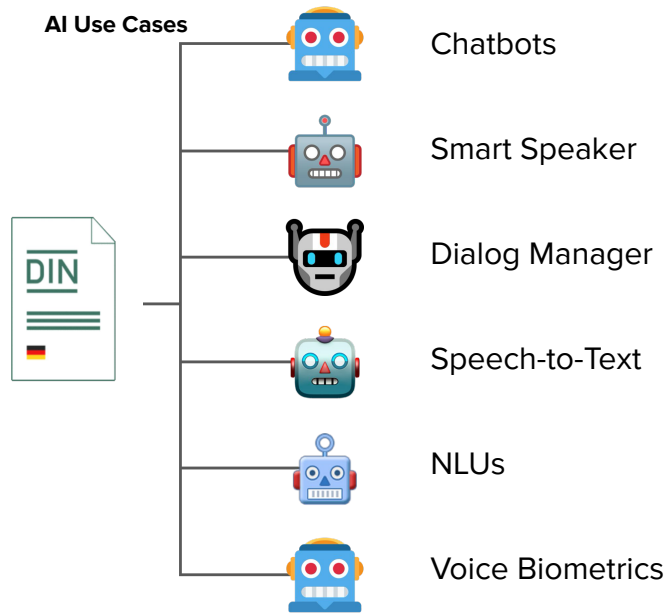
Recommended parameter

```
"DataSecurity": "object",
"Confidence": "object",
"SpeechToText": "string",
"LinkToAudio": "string",
```

Optional parameter

```
"BiometricData": "object",
"Location": "object",
"Session": "object",
"User": "object",
"Entity": "object",
"Device": "object",
"Application": "object",
"SystemVersion": "object",
"Receiver": "object",
"AccessToken": "object",
"StandardVersion": "object",
"Locale": "object"}
```

AI Use Cases

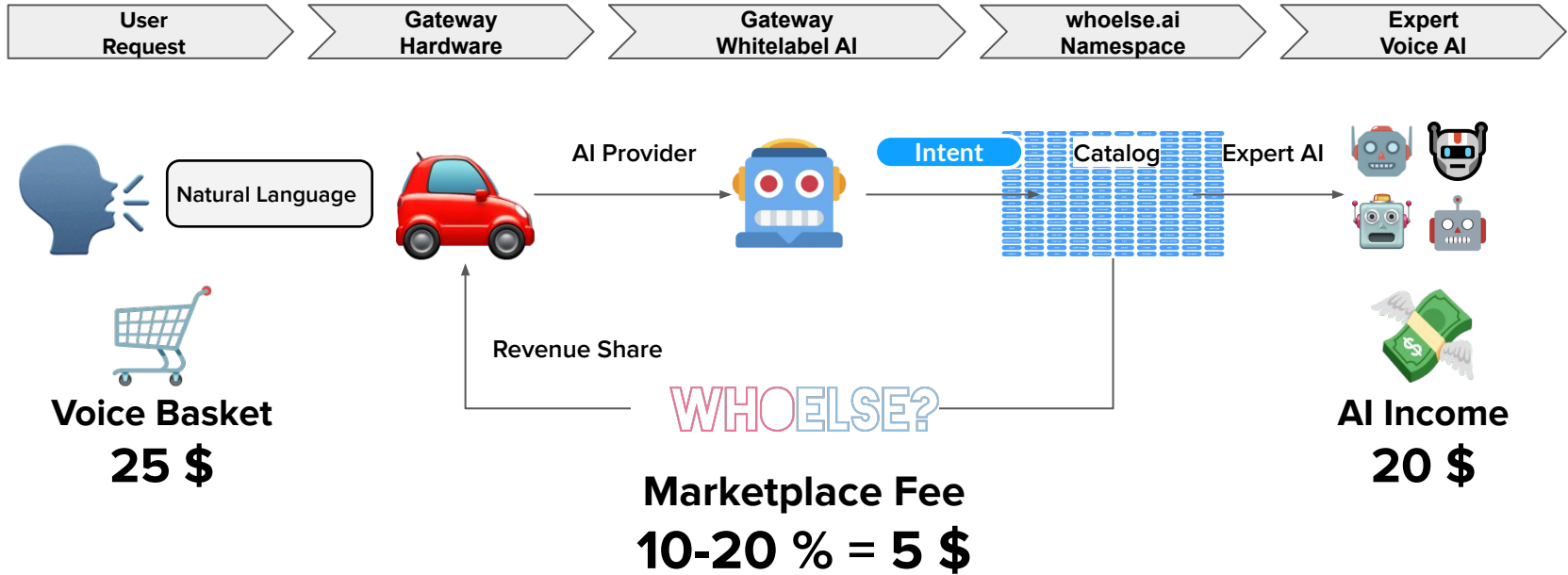


Industry standards make us attractive for industrial AI integrators e.g. OEMs. We help them to become independent from a single provider.

1) <http://whoelse.link/dinspec2343>

Gateway providers earn with every user request forwarded to other voice assistants.

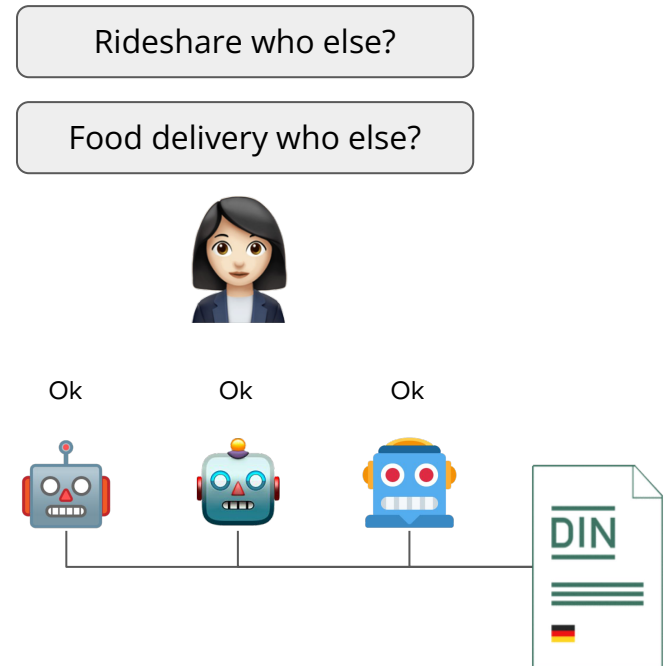
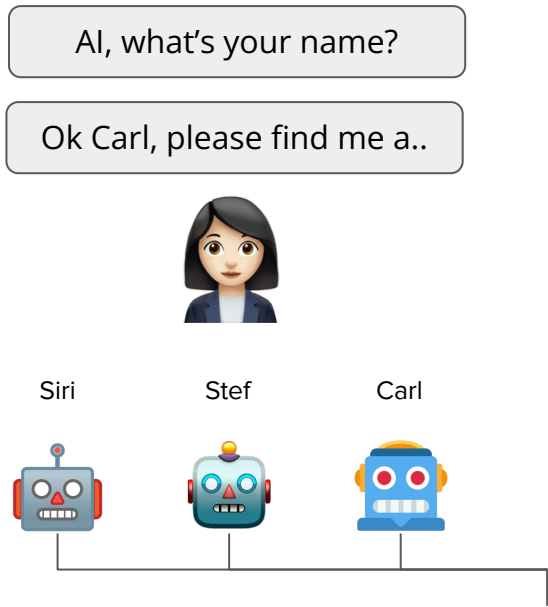
Companies have a strong incentive to integrate our namespace technology. whoelse.ai makes language a commodity.



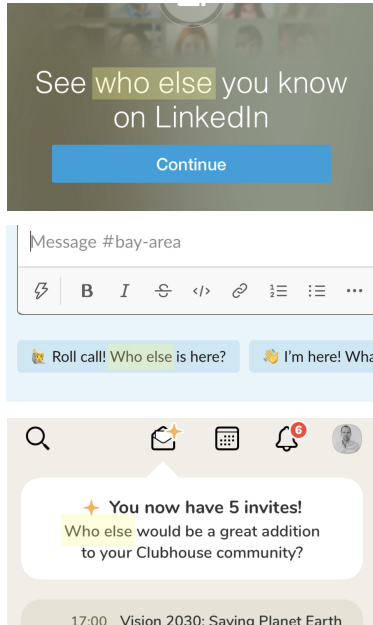
People and AIs can and should talk however they want - we only provide a meta language.

But maybe it is valuable to have a wake word that is universal amongst all voice AIs?

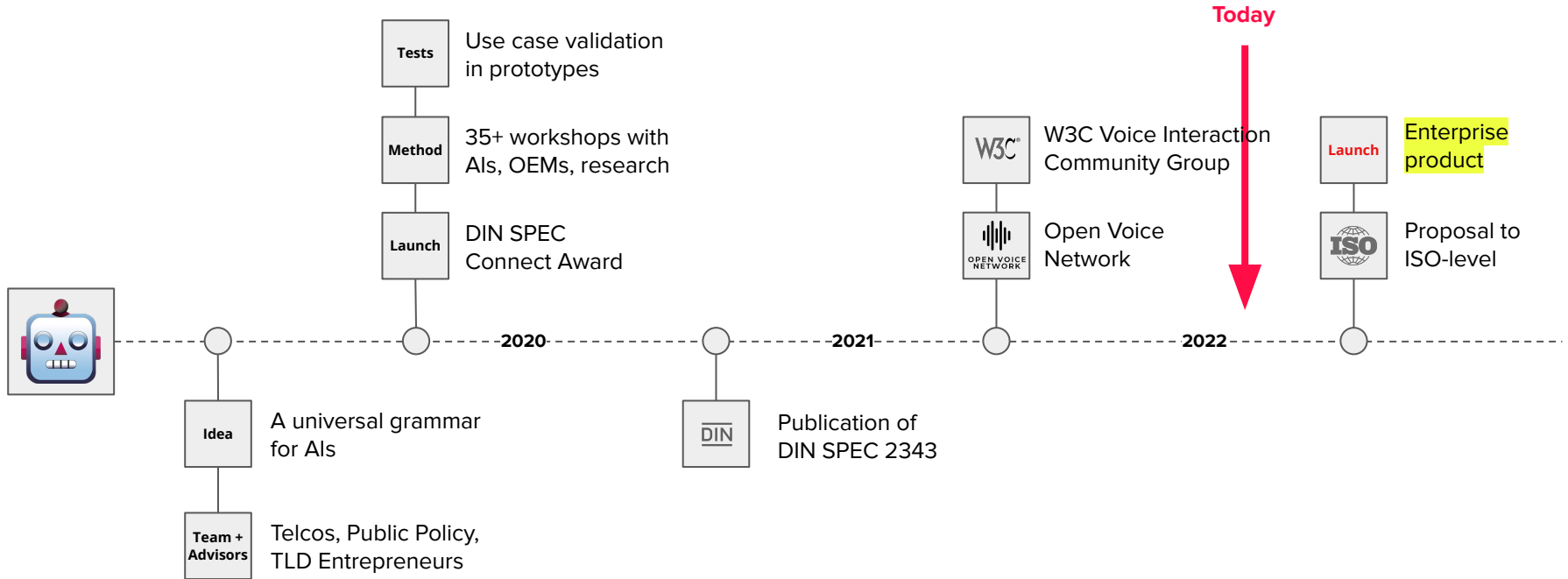
Good language helps consumer adoption of voice AIs.



who else? questions appear to be a proof of Noam Chomsky's Universal Grammar theory. It's language **available to almost all users and extremely easy to learn.** Once memorized, it is likely consumers will prefer *who else?* questions to request services from voice AIs.



We launched by publishing a **DIN standard for NLP interoperability**. Now, we are looking for **industry clients and supporters to build a testbed of connected voice assistants**. Geeks really like what we do - wherever possible, we partner up.



Venture financing & pilots

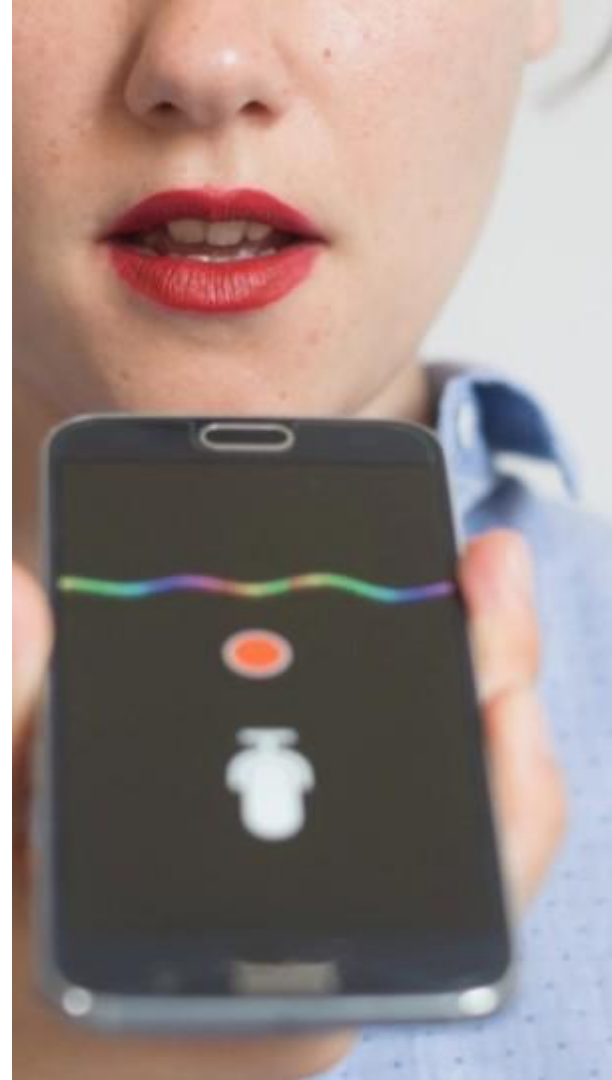
to complete product development and ramp-up B2B sales

Focus: Enterprises readiness

on-boarding of voice AI providers and launch of OEM/telco integrations

Launch of a public voice AI testbed

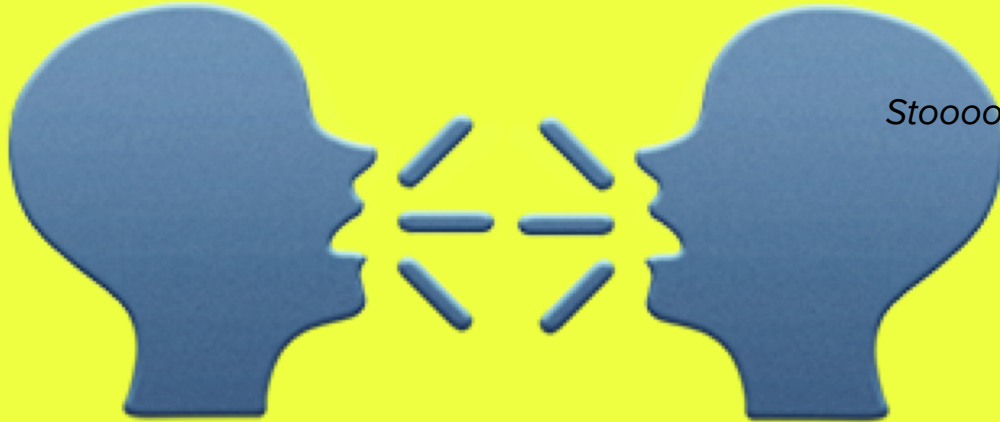
provision of developer tools and release of our own voice assistant



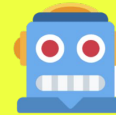
Once multiple voice assistants try to answer a user request in parallel, a shared protocol is inevitable needed to make AIs interpretation results comparable.

*Should we eat Italian
or Greek?*

*Pizza would
be great!*



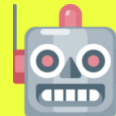
Stooooop Alexa



On it's way!

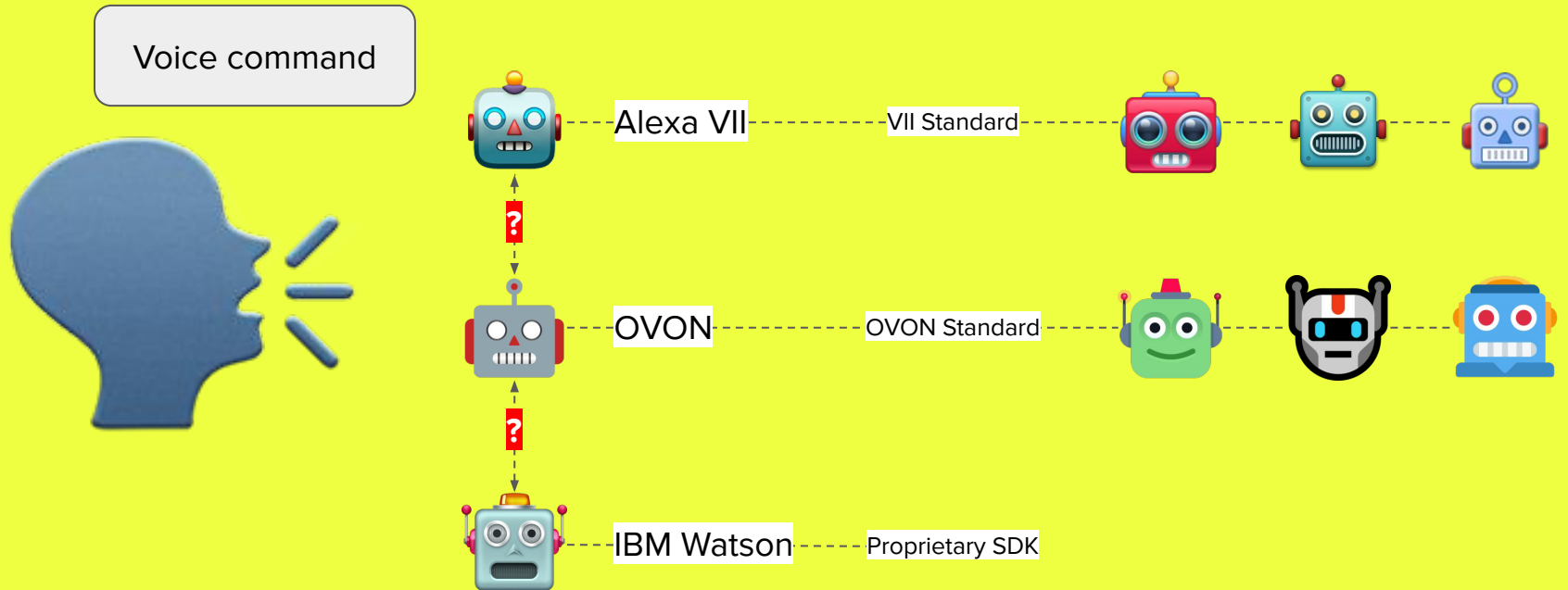


Which dressing do you like?



Sorry, I didn't quite get it.

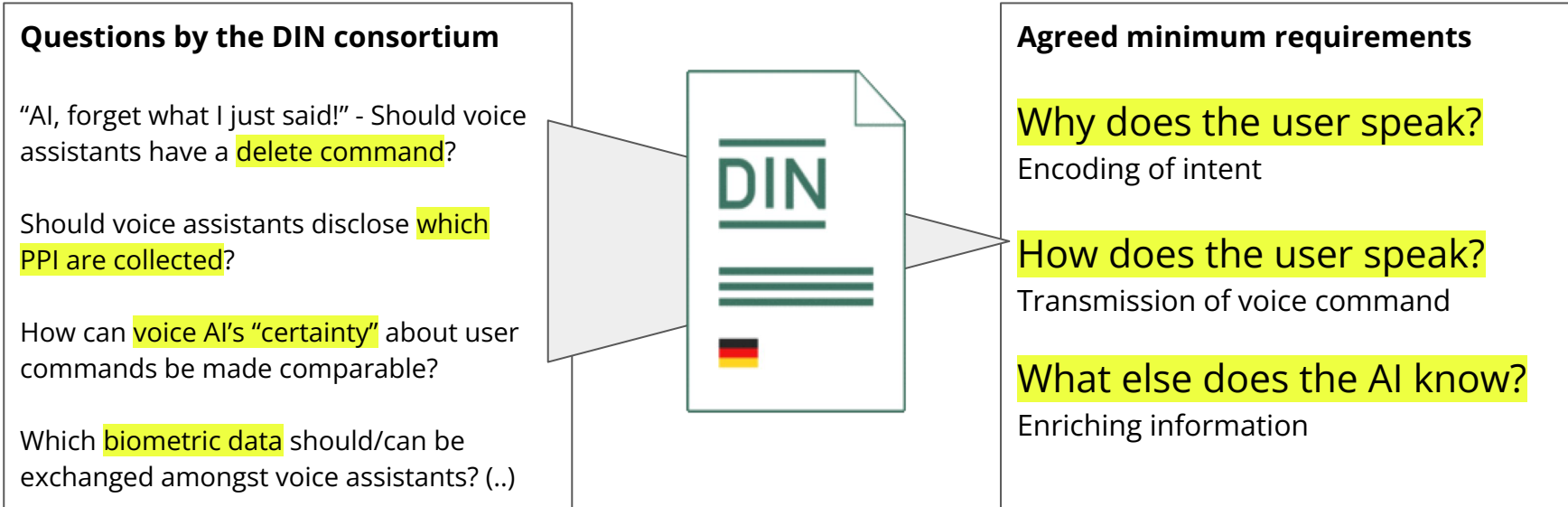
Even if 3 different standards exist, all these ecosystem still needs to compare what they eventually understood.



To be adapted, industry standards must be universally applicable and easy to comply with. 30+ requirements were recognized - DIN SPEC 2343 has however only a very narrow focus. DIN SPEC 2343 is now starting to be used as a purchasing requirement by e.g. OEMs.

“Wishes”

“Reality”



Questions by the DIN consortium

“AI, forget what I just said!” - Should voice assistants have a delete command?

Should voice assistants disclose which PPI are collected?

How can voice AI's "certainty" about user commands be made comparable?

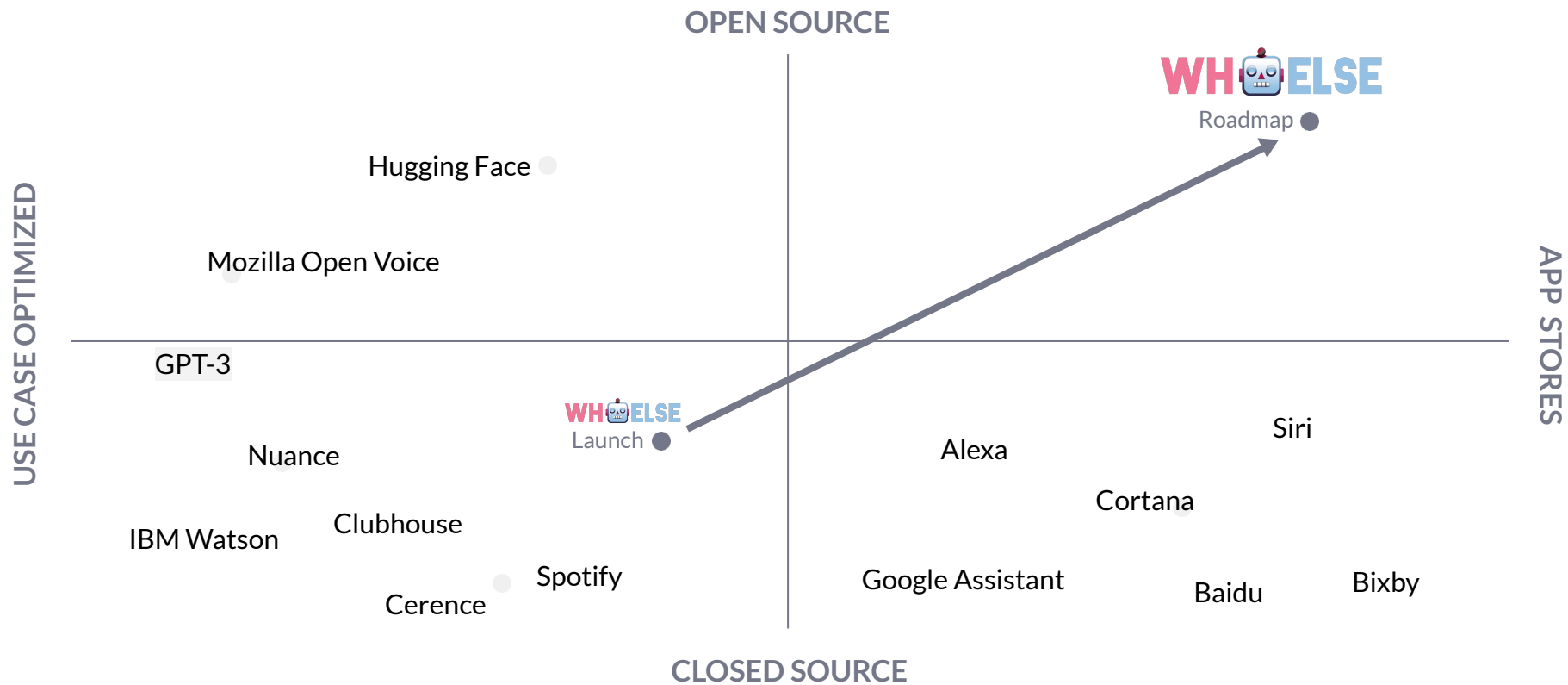
Which biometric data should/can be exchanged amongst voice assistants? (..)

Agreed minimum requirements

Why does the user speak?
Encoding of intent

How does the user speak?
Transmission of voice command

What else does the AI know?
Enriching information



1

Report on the Algorithmic Language ALGOL 60

if B1 then S1 else if B2 then S2 else S3 ; S4
and
if B1 then S1 else if B2 then S2 else if B3 then S3 ; S4

if B1 then S1 else if B2 then S2 else S3 ; S4

B1 false B2 false

2

.wav

MP³
AUDIO

3

Account Chart
 Standard Chart of Accounts (SKR 03)
 Valid for 2021

Balance sheet / Profit and lost item	Program linkage	4 Operating expenses
Other operating expenses		4355 Eco tax
		4360 Insurance premiums
		4366 Building insurance
		4370 Net insurance premium for future pension benefit liability
		4380 Contributions
		4390 Other levies
	4396 Tax-deductible late filing penalties and administrative fees	

1. If-then-else - programming language had to be invented
2. The invention of MP3 - compression by cutting unneeded noise
3. Accounting systems - codified storing of transactions as role model for AI interoperability