who else?

A Universal Language for Artificial Intelligence

"The MP3 for AI" - we make Siri and Alexa talk with each other

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Video:
http://demo.whoelse.ai

EXECUTIVE SUMMARY

who else? is a language for AI you can trust blindly

who else? will be a more trustworthy and fair Voice Internet than any established company could ever build

Macro Driver

$ 45+ bn voice shopping
in the US and UK Market by 2022[1)]

21+ bn IoT Devices
world wide by 2020[2)]

21+ m smart speakers
in the US by 2022[3)]

50% voice searches
off all queries by 2020[5)]

< 3,7 Digital Brands
users remember on average [4)]

1 Consumer Touchpoint
voice will be the most important POS

Value Proposition of who else?

who else? is a trademark for AI usability and access to Voice Internet services. IoT devices with who else? integration are connected to a namespace using an open standard linking to products, services and IoT devices as a Voice Internet.

Free market for everyone: Market entry for Voice Internet products and services, in the who else? Namespace, will be the same for everyone. An open network of services optimized for language-based accessibility.

Unlimited customer touchpoints: Our approach is to give companies their customer touchpoint back! By implementing our protocol and namespace companies are enabled to create new businesses with their IoT devices and gain more customer data.

Transparency by explainable AI: The technology for the protocol and the namespace will be open source. On the one hand developers can use our code for new use cases, on the other hand users will gain trust, because the know and decide which personal datas are shared by their AIs.

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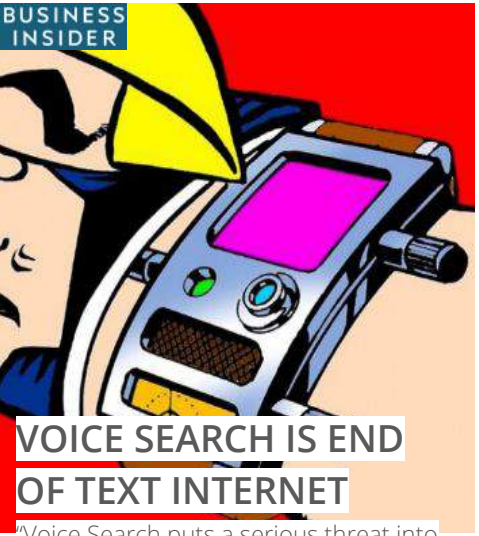
1) VoiceBot.ai 2) Gartner 3) comscore 4) Deloitte 2014 5) Activate

MARKET MOMENTUM

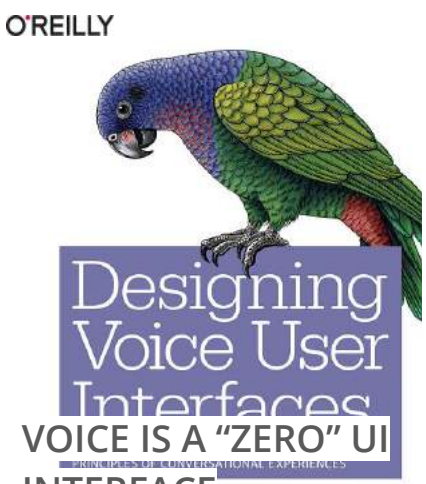
Text Internet will be replaced by Voice Internet

But, which language will Voice Internet end up speaking?



VOICE SEARCH IS END OF TEXT INTERNET

"Voice Search puts a serious threat into the heart of Google's search business."
Business Insider

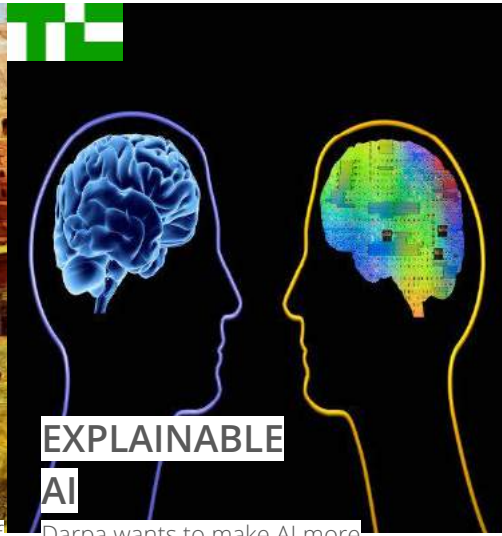


VOICE IS A "ZERO" UI INTERFACE

"With voice, navigation becomes invisible - users need to know what to ask for."
O´Reilly Media

IOT IS LIKE BABYLON

"Nobody but a startup: Why the Internet of Things might never speak a common language."
Fast Company



EXPLAINABLE AI

Darpa wants to make AI more self-consciousness and aware of itself
Techcrunch

PROBLEM

AIs do not talk with each other

Siri, Alexa, Google (..) - they all use 30 year old protocols, they are “black boxes” = proprietary silos

Analysis

AIs are proprietary data silos: Amazon & Apple currently dictate with their APIs the Voice Interfaces market. IoT OEMs pay license fees whilst losing access to their consumer´s data.

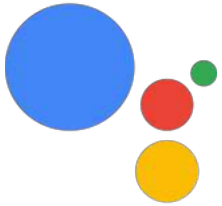
No data standardization between AIs: What hypertext was for Text Internet, is needed for Voice Internet; a markup language for the relationships and links in speech-based AI interfaces.

AI means unfair IoT competition: Brands not owning the consumer touchpoint, will die. Language is the most exclusive namespace available. The way consumers speak already, decides who wins the Internet of Voice.

Voice Internet is the end... of 9 in 10 technology brands. They will first be unseen, and the unheard off.

Siri
(Apple)

Alexa
(Amazon)



Hey, Google!
(Google)

Our solution:
Open Source
Voice Internet

AI black boxes
Privacy nightmares

Privacy by design
Explainable AI encoding

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OUR SOLUTION

who else? is a simplified programming language between humans and AIs

Our protocol reduces the complexity of users spoken commands in AIs by a simplified namespace and grammar - a Universal Language for AI

How humans talk:
Very inaccurate.

There are 500+ different ways to tell an AI “to order Pizza”

“Hey Bosch, I want food - order - delivery - pronto!”

“Fridge, can you drop a lunch order for me?

“Huuuuuuuungry, I am so hungry - call me a pizza.”

“Pizza who else?

who else?
is easier to speak for humans

WHOELSE?
QUIÈNMÀS?
还有谁?
QUI D’AUTRE?
WER NOCH?
КТО ЕЩЕ?

Date	who else?		
Apartment	who else?		
Pizza	who else?		

IN THIS STREET who else? · IN THIS HOUSE who else? · IN THIS CITY who else? · FOOD-SHARING who else? · EVENT who else? · JOB XYZ who else? · STARTUP who else? · UNIVERSITY who else? · PHONE REPAIR who else? · CYCLE CURRIER who else? · DELIVERY who else? · MOVERS who else? · ACCELERATORS who else? · PHOTOGRAPHER who else? · RIDE-SHARE who else? · APARTMENT who else? · IT HELP who else? · FLAT-SHARE who else? · CRAFTSMAN who else? · BOOK CLUB who else? · SPORTS who else? · RELIGION who else? · DATE who else? · SEX who else? · MUSIC who else? · SCOOTER who else? · IN THIS COMPANY who else? · TAXI who else? · TAILOR who else? · BABYSITTER who else? · CLEANER who else? · LAUNDRY who else? · SALE who else? · CAR who else? · HOBBY who else? · SKILL XYZ who else? · LGBT who else? · SALE who else? · LOAN who else? · REFUGEE who else? · GYM who else? · CLOTHING SWOP who else? · CYCLE who else? · FLEA-MARKET who else? · CINEMA who else? · THEATRE who else? · DOG-SITTING who else? · CONCERT who else? · BOARD GAMES who else? · BAND who else? · CASH who else? · SCHOOL who else? · HAIRCUT who else? · GOLF COURSE who else? · TRAVELLING who else? · DOCTOR who else?

How AIs compute:
Very explicit.

There can only be 1 semantic correct representation for the intent “Pizza delivery”

who else?
is faster to compute for AIs

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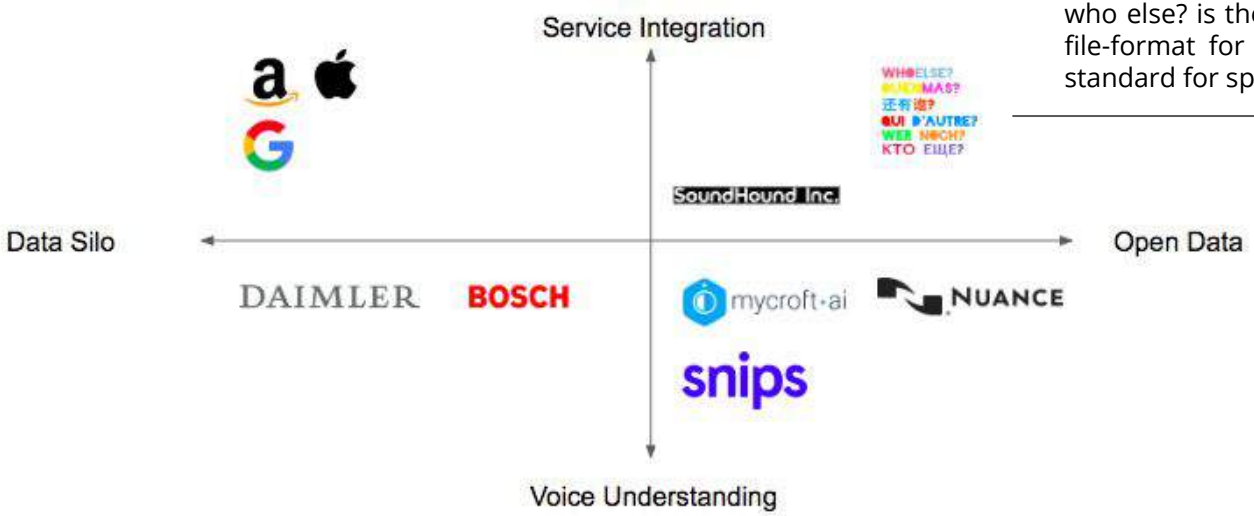
USP

GAFA are black boxes vs. who else? open source Voice Internet

Opening their algorithmic black boxes is a business model today's monopolies have no interest in



The MP3 of AI

who else? is the first privacy by design open source file-format for language-based AI - a compression standard for speech-based computing technologies.

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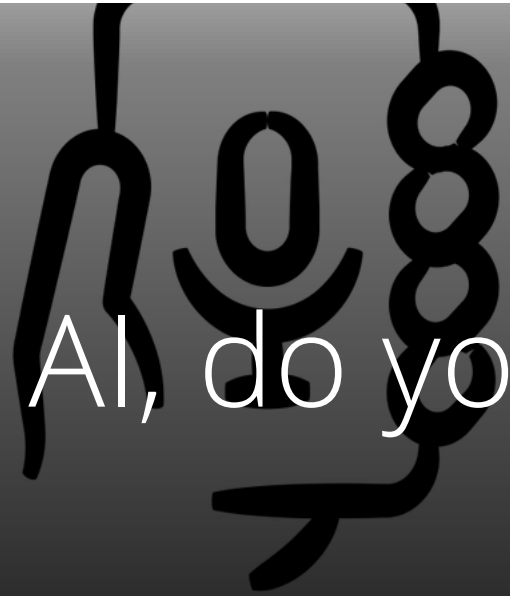
THE TRUE CHALLENGE OF VOICE: USABILITY

How will people know, what they can ask an AI for?

Image: You are approaching a machine for the first time ever - what will you ask?



Hey AI, do you...?

PRODUCT 1/2

A search engine for Voice Internet

Users only have to remember “who else?” and are directly connect with e-commerce services

IoT Hardware

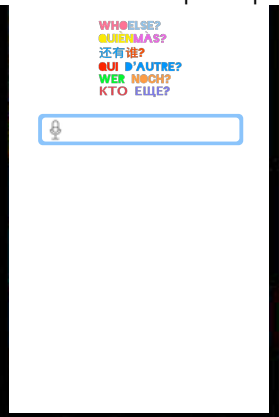
Voice Interfaces

Mobile & Desktop

PRODUCT 2/2

The only question a user ever needs to know

Instead of brands people remember who else? questions



WHOELSE?
QUIENMAS?
还有谁?
QUI D'AUTRE?
WER NOCH?
КТО ЕЩЕ?

Hey Fridge, I want to order Pizza

Pizza | who else?

foodora

WHOELSE?
QUIENMAS?
还有谁?
QUI D'AUTRE?
WER NOCH?
КТО ЕЩЕ?

Hey Fridge, I want to date somebody!

Date | who else?

tinder

http://whoelse.xyz

HOW DOES IT WORK?

A search catalogue for language-based e-commerce

who else? is the first ever address system for Voice Internet

User input

"Hey Bosch, I want food - order - delivery - pronto!"

"Fridge, can you drop a lunch order for me?

"Huuuuuuuungry, I am so hungry - call me a pizza."

Intent Encoding

Service Execution

Namespace encoding

Open source who else? encoding

Pizza

who else?

Universal who else? language namespace match-making

DE

Berlin

Taxi

Restaurant

Food Delivery

Pizza

Sushi

Integration of who else? Voice Internet service partner

Pizza.de

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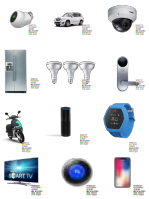
DISTRIBUTION PARTNERSHIPS

We provide IoT manufacturer a trustmark for AI interfaces

who else? is available in our partner´s IoT interfaces as a trusted catalogue of services

Only 1 Question
50+ Voice Internet Services

The only question a user needs to know how to ask for...



Verbal input from any IoT device with a recognizable question

"Hey Bosch Fridge,
I want to go by taxi from here to SFO, who else?"

1

2

Namespace encoding with a unified language for voice interfaces

[Taxi] [from San Mateo] [to San Francisco] [who else?]

Provider selecting of a common online service catalogue

mytaxi UBER lyft wheely

3

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USE CASES 1/2

We connect people with language-based e-commerce

Every kind of on-demand service a user could think of asking for..

Food Delivery

Verbal input

"Hey device,I want a cheese pizza!"

1

Namespace encoding

Delivery cheese pizza who else?

2

Online service

foodora, UBER eats, deliveroo, Lieferheld

3

Ride Sharing

Verbal input

"Hey device,I need a ride share asap!"

1

Namespace encoding

Rideshare now who else?

2

Online service

DriveNow, Lime, CAR2GO, COUP

3

Barbar reservation

Verbal input

"Hey device, i need a haircut tomorrow morning?"

1

Namespace encoding

Barber tomorrow 10-12 a.m. who else?

2

Local service

3

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USE CASES 2/2

We connect people with language-based IoT technologies

Internet of Things becomes available “in simple words”

Social Community

Verbal input

“Hey device, who wants to have dinner tomorrow night?”

1

2

Namespace encoding

Dinner tomorrow night who else?

Social service

3

Real Estate

Verbal input

“Hey device,book me a conference room!”

1

2

Namespace encoding

Conference room now private who else?

Private service

3

IoT Devices

Verbal input

“Hey device, is my car fueled up?”

1

2

Namespace encoding

Car fueled up private who else?

Private service

3

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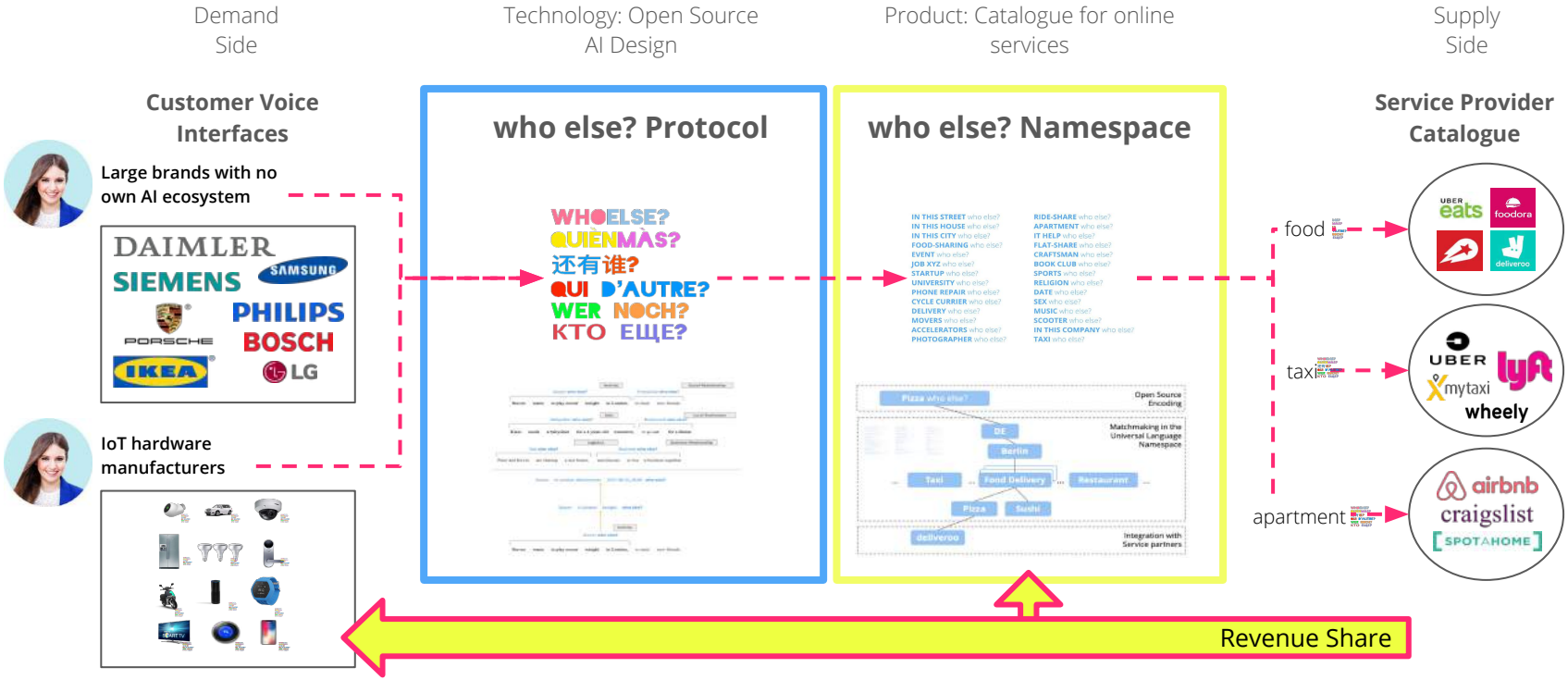
OUR NETWORK

An open source platform for Voice Internet e-commerce

The first affiliate programme for language-based commerce: IoT vendors earn with every user they dispatch to e-commerce vendors



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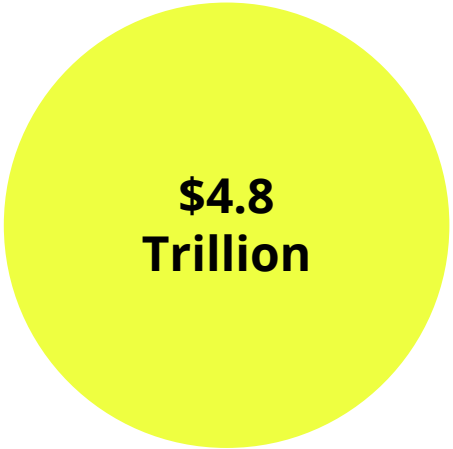
MARKET SIZE

Our technologies enable the voice-based economy

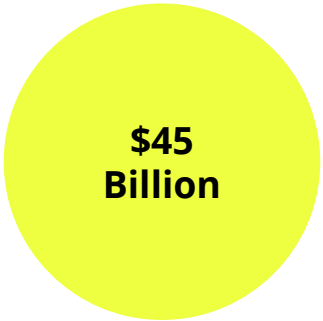
If we capture only 1% of the voice search market, we are building a multi-billion dollar business



E-commerce market

Worldwide by 2021[3)]

Total Available Market



Voice shopping

In the U.S. and UK Market by 2022[4)]

Serviceable Market

Transactions within namespace

by 2022

Market Share

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1) Gartner 2) Activate 3) According to a report from Technavio via Skyword. 3) Statisa 4) VoiceBot.ai

BUSINESS MODEL

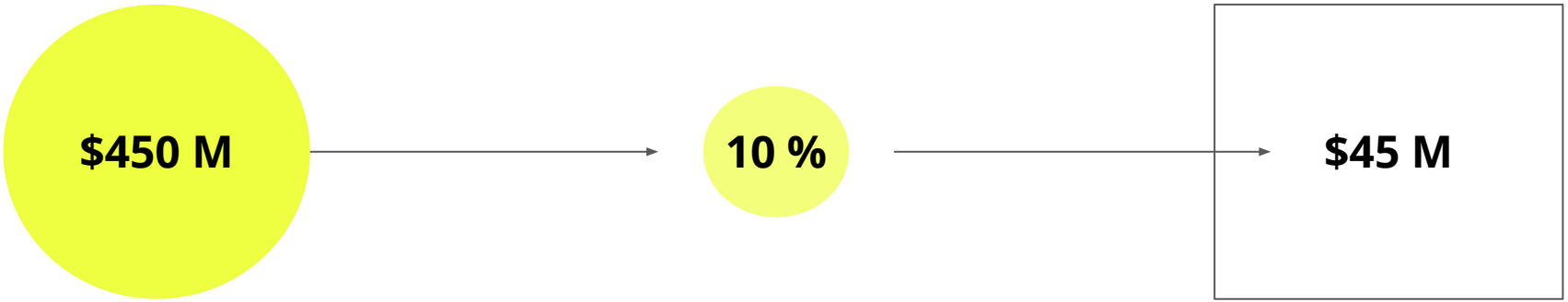
Lead generation for voice-based e-commerce

Our business model will develop in 3 steps

1. Phase
LeadGen
Transaction fee & revenue share for IoT manufacturer

2. Phase
License Model
who else? as a trustmark for IoT devices

3. Phase
Advertising
who else? will be the google of “Voice Internet”



est. Turnover
in the Namespace in 2022

Fee
Monthly spending $50/User

Revenue
incl. $10 M for IoT OEM

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BRANDING ADVANTAGE 1/2

A self-explanatory Voice Internet brand

Users only have to remember one name to ask for any kind of service they “can think of”

Old: People had to learn brands

airbnb Apartment = AirBnB

tinder Date = Tinder

MonkeyParking Parking space = Parking Monkey

DELIVEROO Food delivery = Deliveroo

Care.com Nursing = Care dot Com

New: People can anticipate by brand commonality

WHOELSE? QUIENMÀS? 还有谁? QUI D'AUTRE? WER NOCH? КТО ЕЩЕ?

Apartment who else?

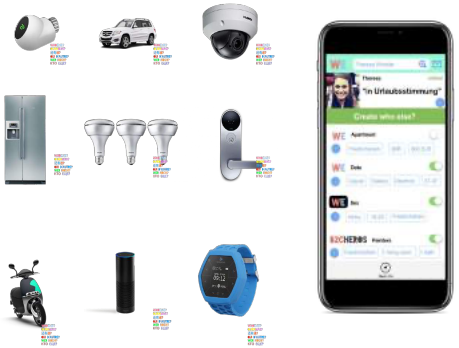
Date who else?"

Parking space who else?

Food delivery who else?

Nursing who else?

Users only have to remember 1 brand to ask for



Available as Open Source Voice Internet API by who else? IoT Device partner

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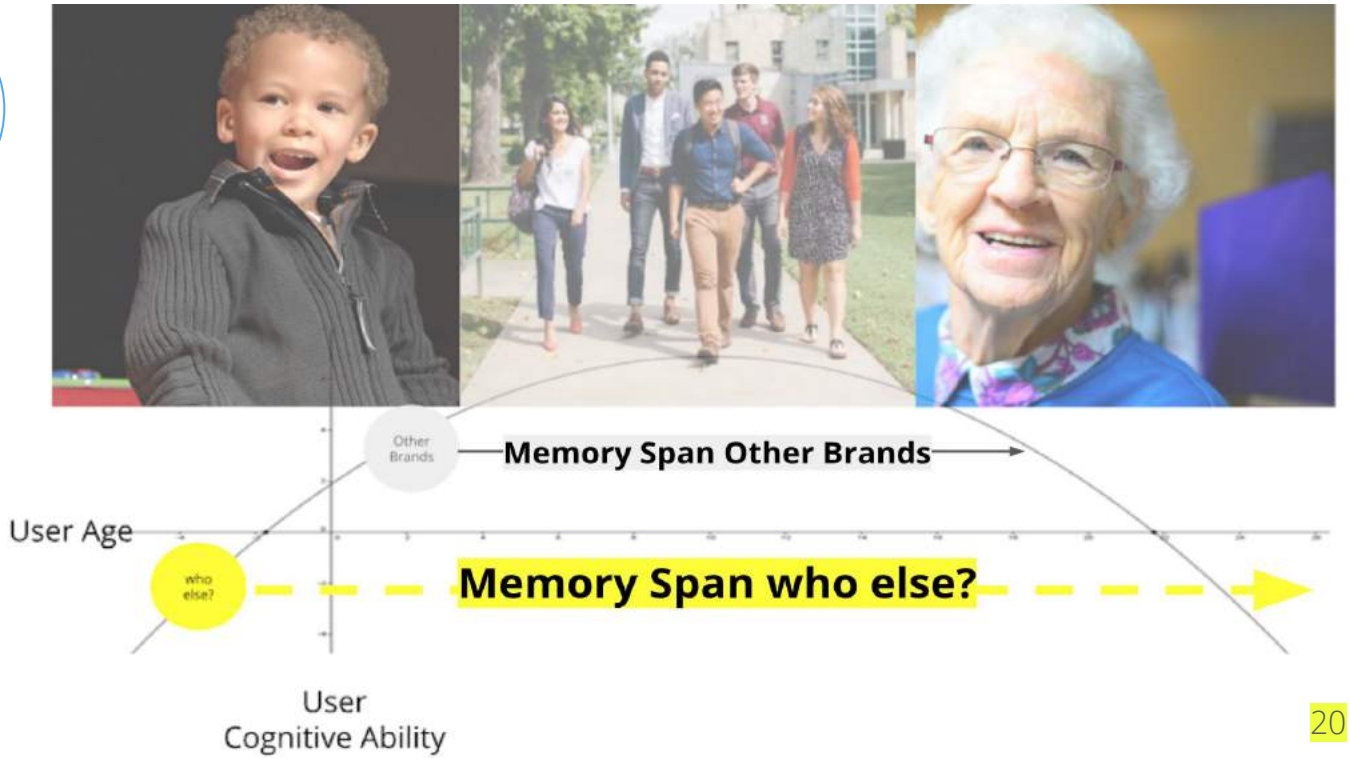
BRANDING ADVANTAGE 2/2

who else? is a brand everybody knows already

who else? is a brand even children understand to use - language “hard-wired in the human mind”



ROADMAP

A B2B2C artificial intelligence company

Together with B2B partners who else? creates the first ever Voice Internet marketplace

Seed Phase
($ 2.5m)

Today
Available in Germany / USA as app & in first IoT integrations

Planned: 50+ partnerships demand e-commerce offerings

18 Month
White-label IoT devices partnerships

Privat who else? namespaces

Din Spec certification completed

5 Years
Worldwide who else? coverage

Active who else? community service

More traffic than text internet

Vision
Give the customer an easy way to connect to Voice Internet without knowing any specific service name:

who else? is the address system of language-based e-commerce.

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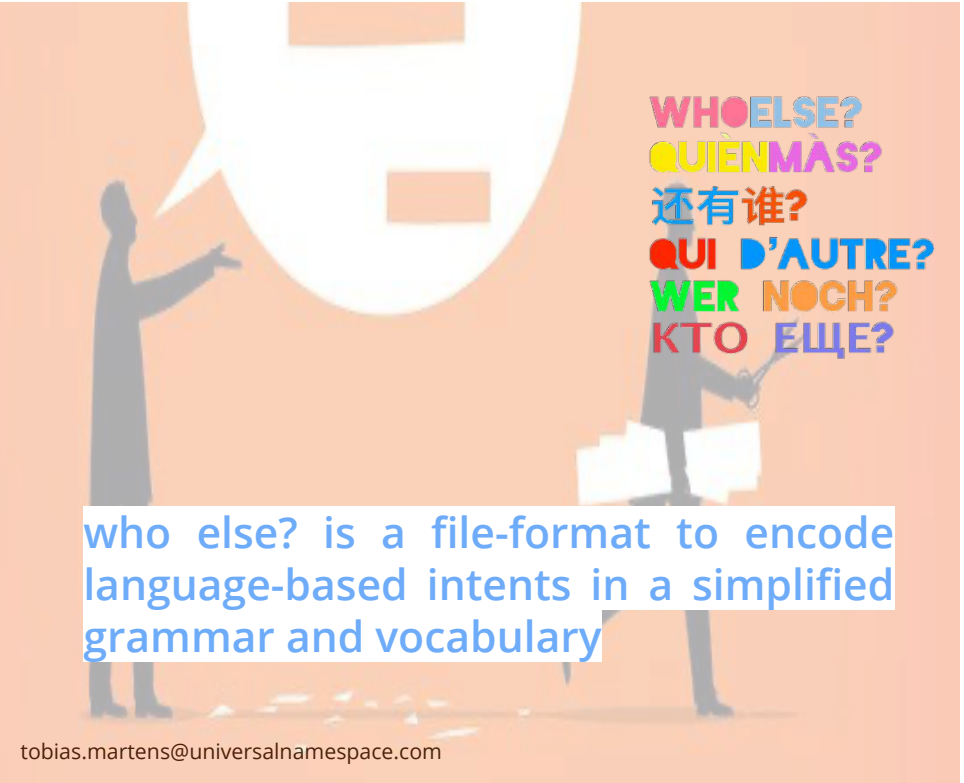
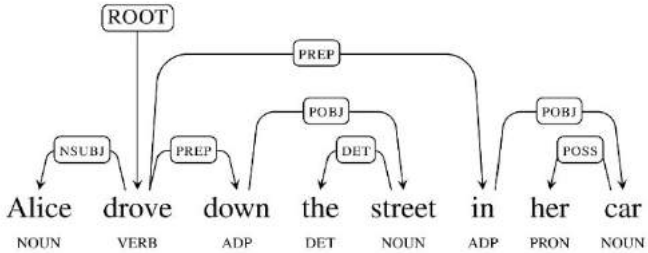
TECHNOLOGY POSITIONING

We are developing a “meta” language for AI

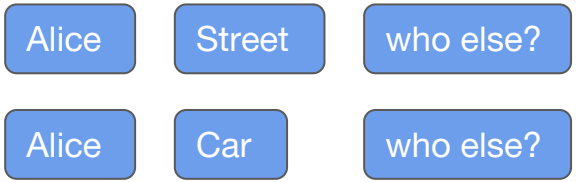
who else? makes the contents of spoken language computable and linkable - the Hypertext of Voice Internet



Output by Google SyntaxNet:



Abstraction in who else? language:



We provide a standard to encode the contents of language (e.g. by NLUs like Google Syntax Net, Nuance, etc.) in a simplified markup language.

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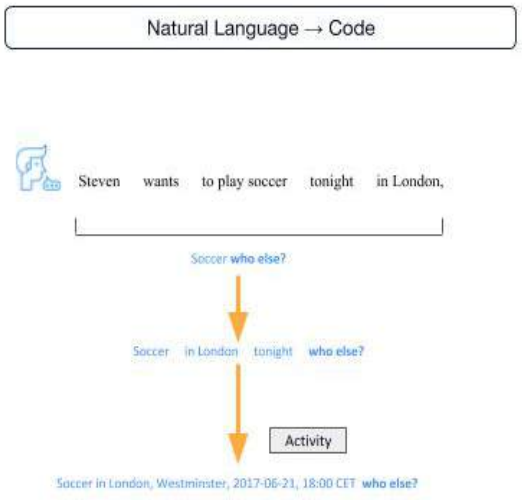
COMPRESSION METHOD

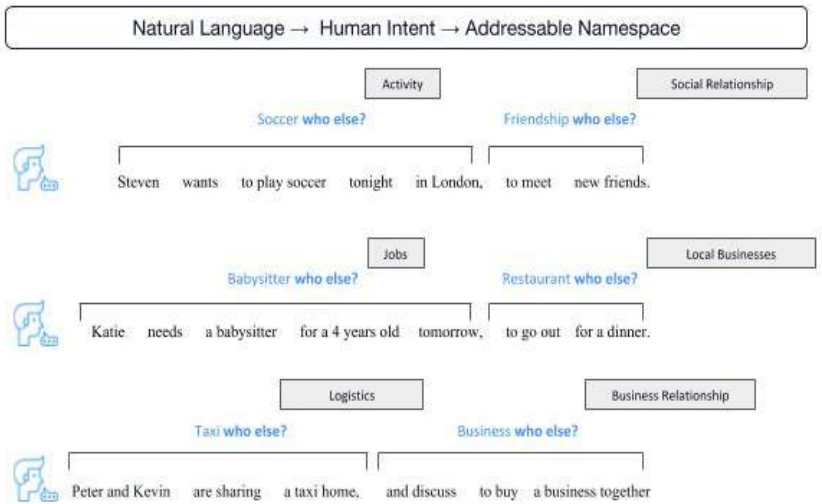
Human language is simplified in who else? questions

Speech-based contents are reduced to the simplest abstraction available in human language: who else? relationships

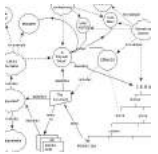
whoelse.ai Annotation Detail Depth



whoelse.ai Namespace Variety



Historical Predecessors



1989

Tim Berners Lee´s Hypertext Protocol marks the beginning of Text Internet

1994

Fraunhofer MP3 starts the era of sound-enabled Internet services

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ENABLING AI EXPLAINABILITY

We make speech-based contents cross-language computable

The Esperanto of AI - a universal language for AI

"Hey Alexa, I want to travel from Berlin to Hamburg with a ride-share. Can you find a ride today?"

EN	Carsharing	Berlin	Hamburg	07-05-2017	**who else**	**?**
FR	Partage de voiture	Berlin	Hamburf	07-05-2017	**qui d'autre**	**?**
CN	Qìchē gòngxiǎng	Bólín	Hnbǎo	07-05-2017	**shuí hái**	**?**

"I am looking for a room to stay in London next week, for 2 people, to stay 7 days, I pay upto 500 Euro"

EN	Apartment	London	01-05-2017	07-05-2017	2 adults	500 €	**who else**	**?**
ES	Apartmento	Londres	01-05-2017	07-05-2017	2 adultos	500 €	**quién más**	**?**
DE	Wohnung	London	01-05-2017	07-05-2017	2 Erwachsene	500 €	**wer noch**	**?**

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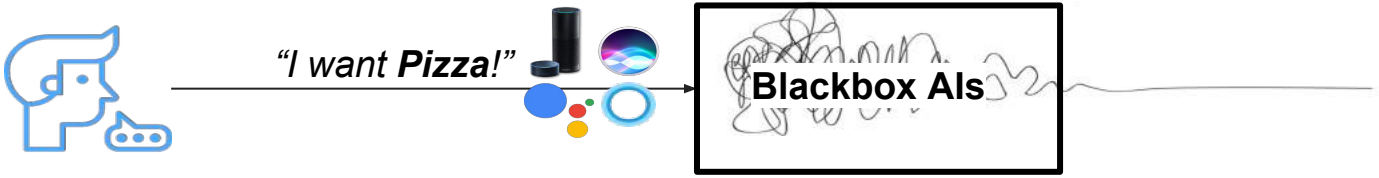
TECHNOLOGICAL NOVELTY

A transparent selection process for voice search

Language-based user queries are connected with “hard to remember” e-commerce brands

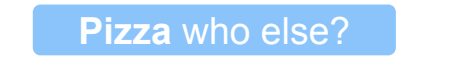
Old: Proprietary selection by blackboxed AIs



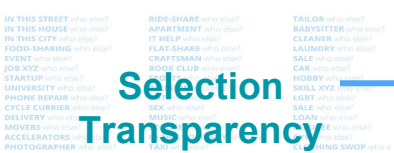
GAFA AI Monopoly

New: Open source encoding and computing of human language

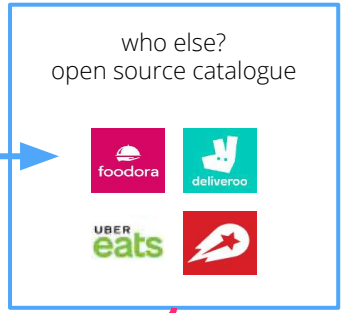
open source voice integrations



encode spoken commands in a unified language



operated as universal namespace



Revenue share for IoT interfaces

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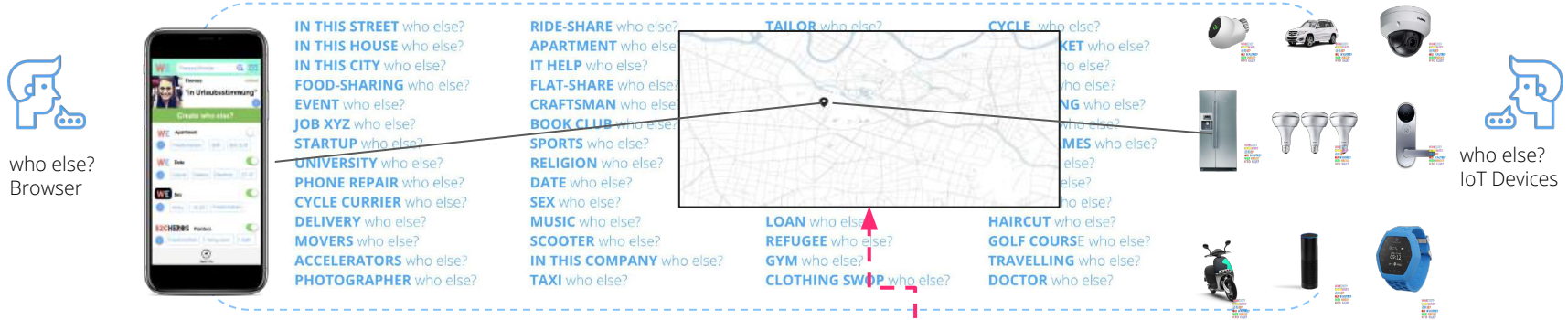
BUILDING A VOICE INTERNET MARKETPLACE 1/3

who else? is an address system for voice-based service requests

User´s verbal intent is linked to a database of local e-commerce providers



Verbal Input

Namespace Encoding

“Hey Siri, who is into Tennis and available tomorrow afternoon!”
“Hey Bosch Fridge,I want to go by car from here to SFO!”
“Hey Alarm System, I want to know if the children already at home!”
“Hey Mercedes, I want to drive with you!”

Tennis Central San Mateo Tuesday 14-18h who else?
Rideshare from San Mateo to San Francisco who else?
Who else is registered in the building at 123 5th Street?
Who else can rent Mercedes 350?

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BUILDING A VOICE INTERNET MARKETPLACE 2/3

IoT voice interfaces are linked to an e-commerce catalogue

On-demand vendors & IoT manufacturer connect in an open marketplace

who else? enabled devices pick-up the voice-based user requests

3rd party voice AIs (e.g. Nuance) abstract the intent into the simplified open source who else? language

Matchmaking in the who else? namespace is done by whoelse.ai

"Hey, Bosch Fridge, I want to order Pizza!"

IoT OEMs earn a revenue share for operating a who else? interface

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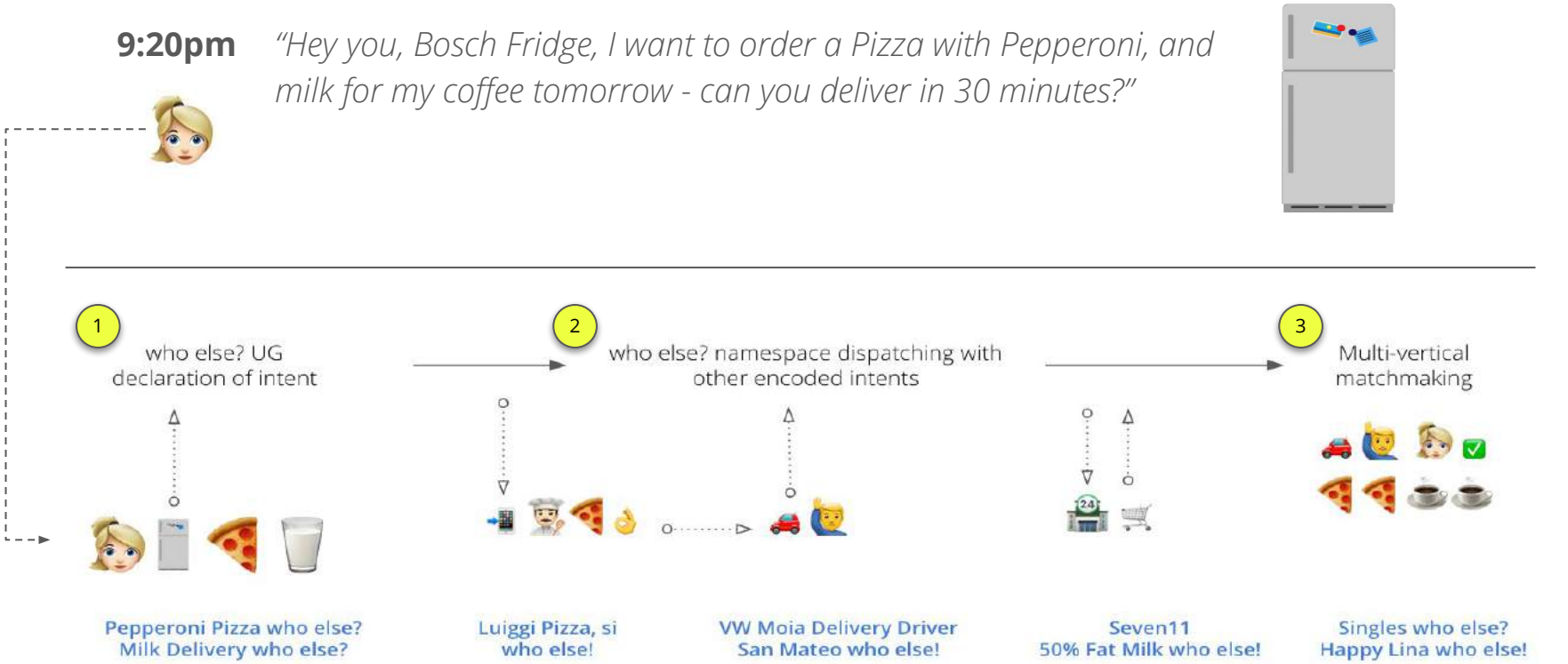
BUILDING A VOICE INTERNET MARKETPLACE 3/3

Our vision is to enable the explainable supply chain

We connect industries in simple language

9:20pm *"Hey you, Bosch Fridge, I want to order a Pizza with Pepperoni, and milk for my coffee tomorrow - can you deliver in 30 minutes?"*



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USE CASES

who else? enables connected IoT & AI ecosystems

Our protocols link people, cities and industries

Smart Home

(At home) (Weserstraße 20, Berlin) (who else?)
e.g. Energy Management (heating, electricity)

(Building access) (Weserstraße 20, Berlin) (who else?)
e.g. Security, E-Commerce (temporary access management)

Connected Mobility

(Ride-share) (Weserstraße 20 - Fridrichstraße 1a) (who else?)
e.g. Shared mobility

(In this bus) (Line 240) (who else?)
e.g. Public transparent (explainable AI)

Industry 4.0

(Building occupancy) (WeWork, Potsdamerplatz) (who else?)
e.g. Crowd management (explainable AI)

(In this location) (Potsdamer Platz) (who else?)
e.g. Intelligent infrastructures

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Nikola Dayalnov of Singularity Weblog:

This unified grammar between machines and humans (..) as a common language between AI and their users (..) could be *the* missing link between artificial and natural cognitive intelligence.

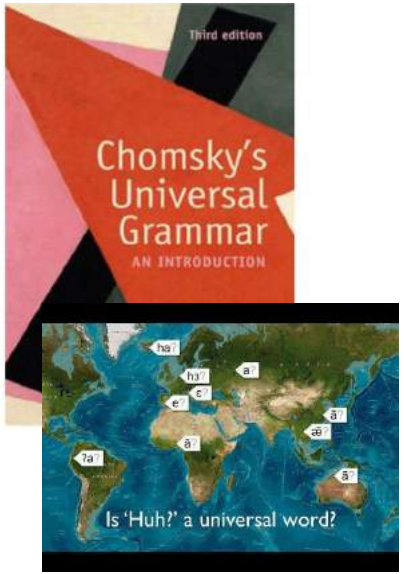
https://www.youtube.com/playlist?list=PLVvj6noSyWkrivBLePi2gG3iuSZ9aSurd

SECRET SAUCE

The science of hard-wired language

who else? is a new proof of Chomsky's Universal Grammar

UG is a theory of language in the human brain that is naturally so “hard-wired”, everybody recalls, interprets and augments it:



“Universal grammar (UG) in linguistics, is the theory of the genetic component of the language faculty, usually credited to Noam Chomsky. **The basic postulate of UG is that a certain set of structural rules are innate to humans, independent of sensory experience. With more linguistic stimuli received in the course of psychological development, children then adopt specific syntactic rules that conform to UG.”**

* Universal Grammar describes semantic components that structure how humans communicate and thus are being recalled, recognized and remembered by everybody.

* The last proof of Universal Grammar was awarded with an alternative “IG” Nobel Prize to Max-Planck Researcher in 2015.

* Using the same research methods, we proved that “who else?” exhibits strong UG characteristics and can be considered “hard-wired”: A brand everybody responds to.. who else?

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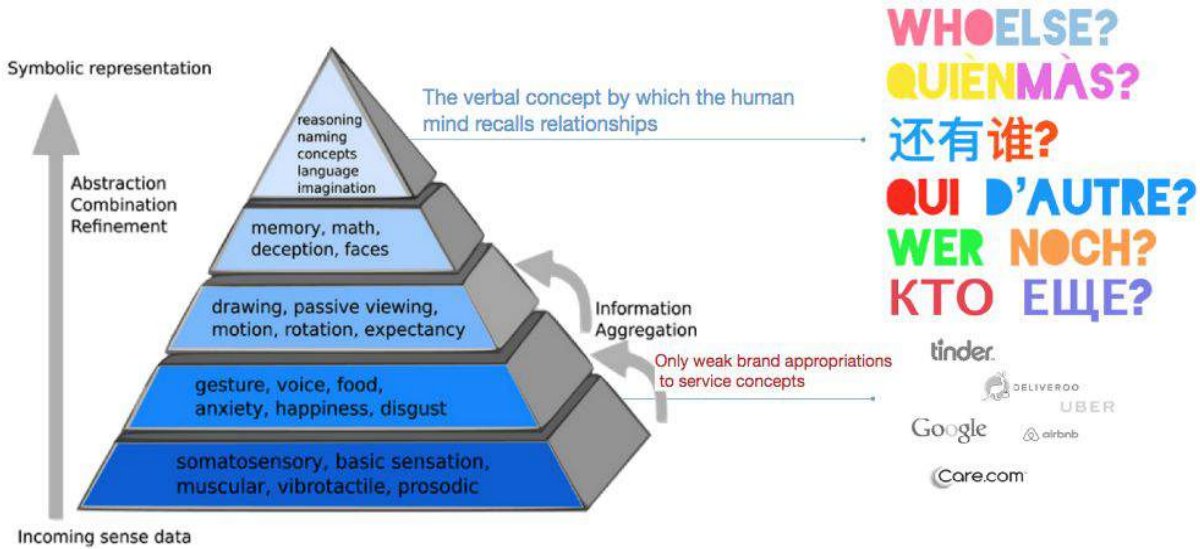
MARKET VALIDATION 1/4

Branding is the file-system of the human mind

who else? = the verbal “cognitive” representation how people recall online services

Ray Kurzweil´s Pyramid of Cognitive Reception
How does the human mind represent information?



Language is the file-system of the human mind:

who else? likely is the the semantic concept by which people verbally remember the interaction they experience in online services.

By its commonality who else? is faster learned and more natural recalled than every other brand representing digital service concepts.

This makes who else? a brand designed for natural “hard-wired” voice usability and cognitive virality.

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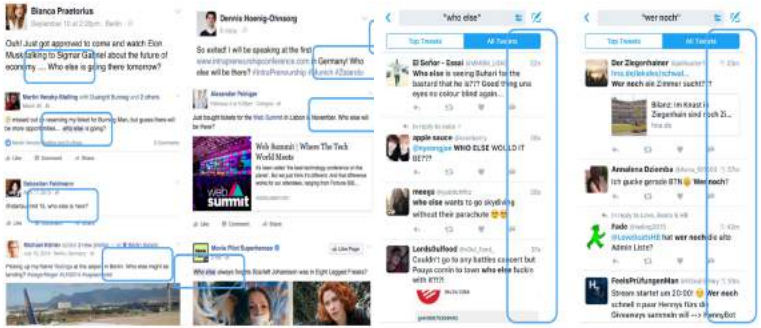
MARKET VALIDATION 2/4

An extremely frequent brand

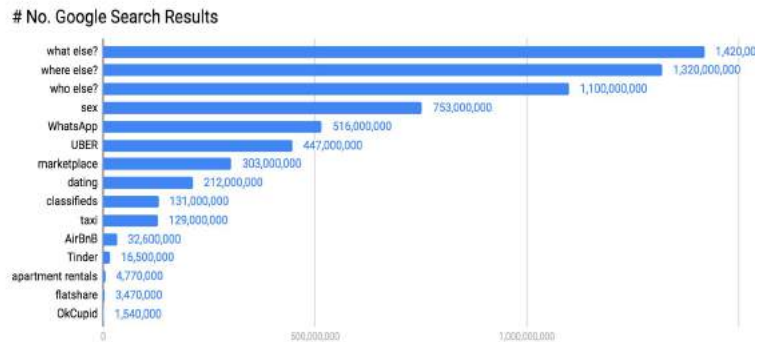
who else? is how people speak in/about/with Internet services

1



(1) Users query their friends asking “who else?” in social networks.

2



(2) “who else?” is one of the most common semantic concepts used across Internet services measured by Google Search Results.

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MARKET VALIDATION 4/4

who else? is common language already

New York Times (2016): “The oldest challenge of technology marketing: Become verb!”

We are verb already - everybody uses us

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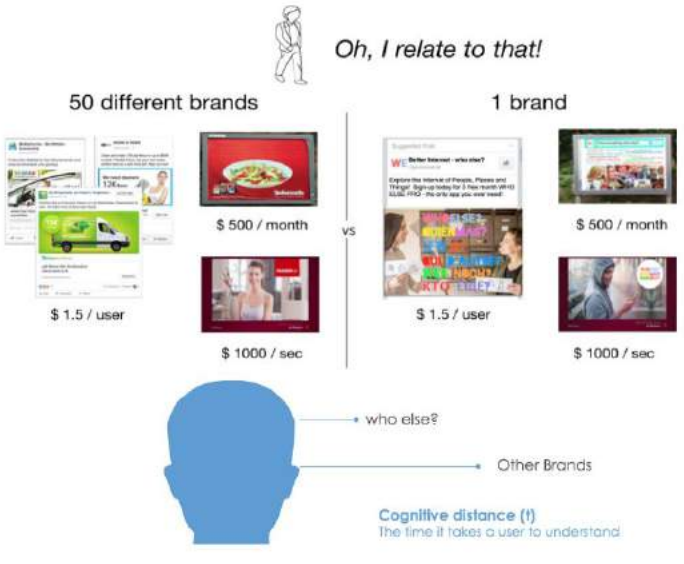
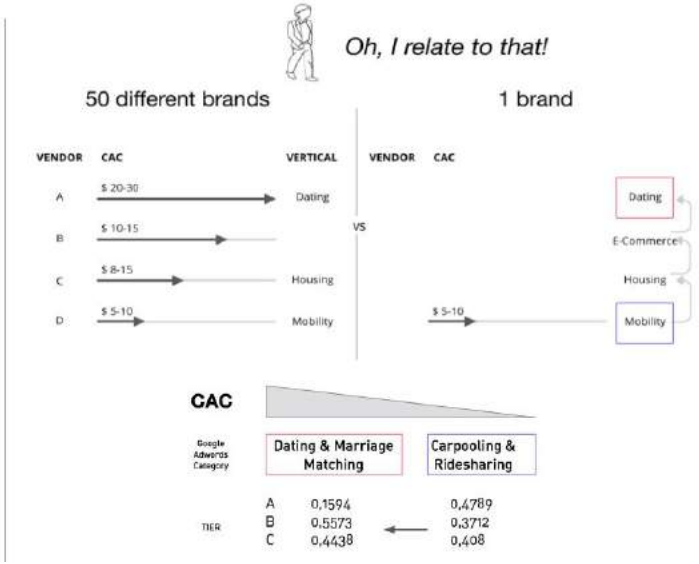
MEMORABILITY AS MARKETING ADVANTAGE

Infinite upselling of attention

who else? is a brand designed for cognitive cross-selling

Consumers resonate faster with “who else?” and are reached by “who else?” brand claims on multiple interest verticals at once, always.





User's cognitive ability is a bottleneck:

ø 3,7

brands

Users remember 80% of their time less than 4 apps frequently.

The Smartphone Generation Gap: Over 55? There is no app for that
Deloitte

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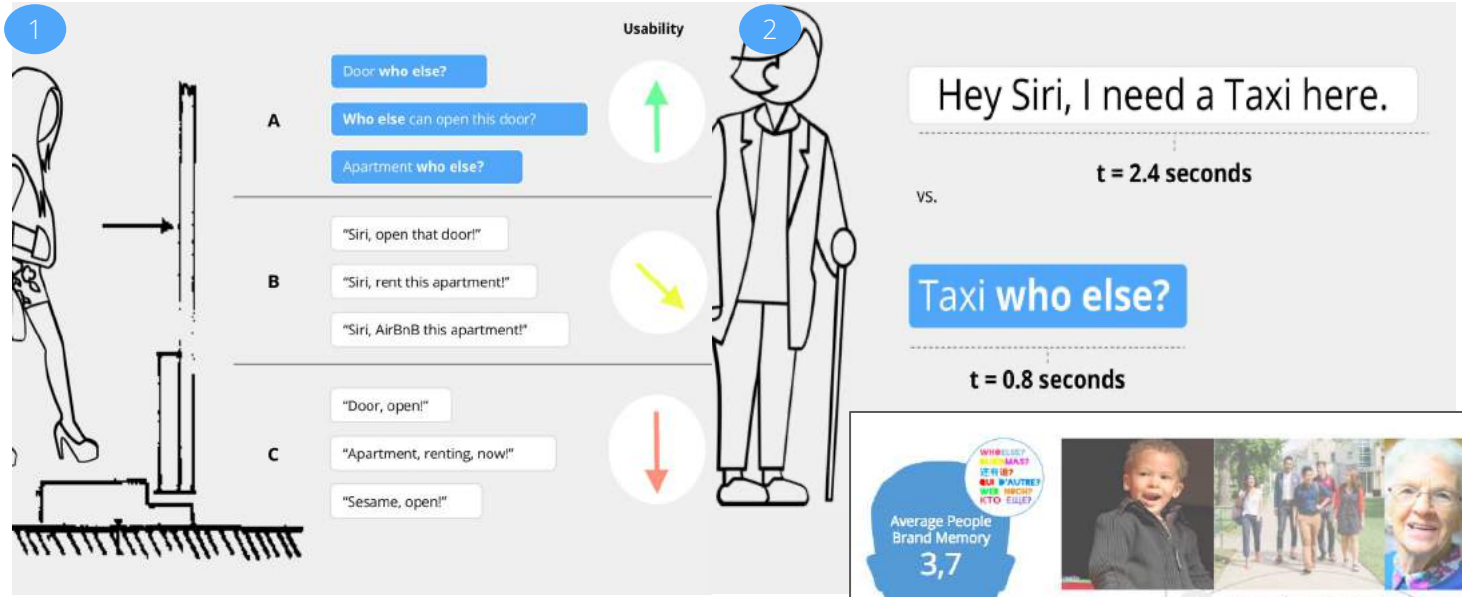
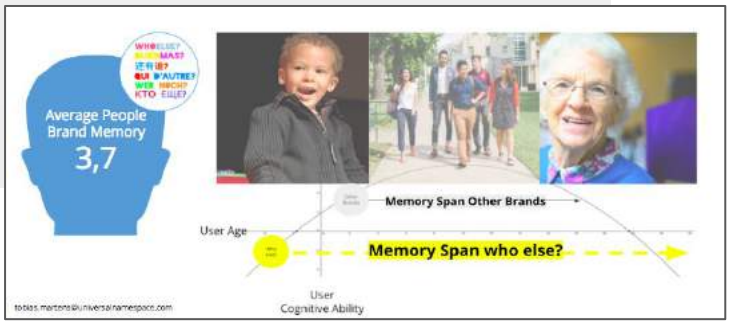
USABILITY AS MARKETING ADVANTAGE

How nice should a user be to an AI?

who else? is the most simple, yet organized and nice way to query a speech-based interface





(1) who else? is the most logical question for users to speak with devices they don´t know yet.

(2) who else? is the most shortest, yet semantically correct question to speak with an AI explicitly correct.

who else? is a brand with life-long better memorability & AI usability: A child- & age-friendly language for AIs

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DAVID VS. GOLIATH PROBLEM

Why don't Google, Apple, Facebook, Amazon do it?

who else? has a business model today´s monopolists have no interest in: Opening their black boxes

Siri
(Apple)

Alexa
(Amazon)

Hey, Google!
(Google)

Voice Assistants from GAFA are currently dominating the market. But they are black boxes and have no interest in a common voice internet, because GAFA wants to control the customer touchpoint and the business cases behind the voice interfaces.

Single IoT vendors will not be able to challenge this oligopol.

- GAFAs are building independent ecosystems for the voice internet with no interaction.	+ Who else? builds a common ecosystem for every brand and service partner.
- GAFAs are controlling the customer touchpoint.	+ OEM holds the customer touchpoint.
- Customer datas are not shared with anyone.	+ Customer datas will be transferred by oem.
- Customer Intents are handled in black boxes.	+ Transparent dispatching of intents.
- Complex to get integrated in separate ecosystems (alexa skill, Made for Apple,...)	+ Easy integration and linking to the common ecosystem via an open source protocol
- Exclusive selection and control of the business cases behind the voice interface	+ Voice interface provider will get a revenue share for the lead generation and has an incentive
- Why should we have different names for every voice interface?	+ One hard wired semantic to use every voice interface intuitive!

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MARKETPLACE ROLL-OUT

The who else? Voice Internet marketplace is rolled out in 3 stages

E-Commerce vendors are on-boarded in 3 stages

Stage 1:
On-Demand Services
1-to-Business

- **Taxi** who else?
- **Pizza** who else?
- **Hotel** who else?
- **Flight** who else?
- **Babysitter** who else?

Stage 2:
IoT Services
1-to-IoT

- **At home** who else?
- **Car-sharing** who else?
- **Door access** who else?
- **Fridge** who else?
- **Meeting room** who else?

Stage 3:
Community Services
1-to-Many

- **Date** who else?
- **Party** who else?
- **Sports** who else?
- **Cinema** who else?
- **Book club** who else?

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OUTLOOK

We are building voice-based economies

who else? will be No. 1 Voice Internet query: Because users can guess by their own imagination and the commonality of language, what else they can ask for using “who else?” grammar.

2019

- Launch of the who else? protocol and namespace
- Providing an ecosystem of integration and on-demand service partners in the namespace
- Become relevant in the german and us market

2020

- Integration of private IoT Devices
- Become relevant in more countries (europe, asia,...)
- Self growing Integration and service partner network
- Integration of community services to grow the customer engagement

2024

- who else? is worldwide known as the brand for accessing the voice internet
- Who else? Is disrupting the text internet, google search and voice assistens
- The who else? protocol is the standard for saving and exchanging voice datas

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