

Convercon 2019

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Global trends in Voice adoption

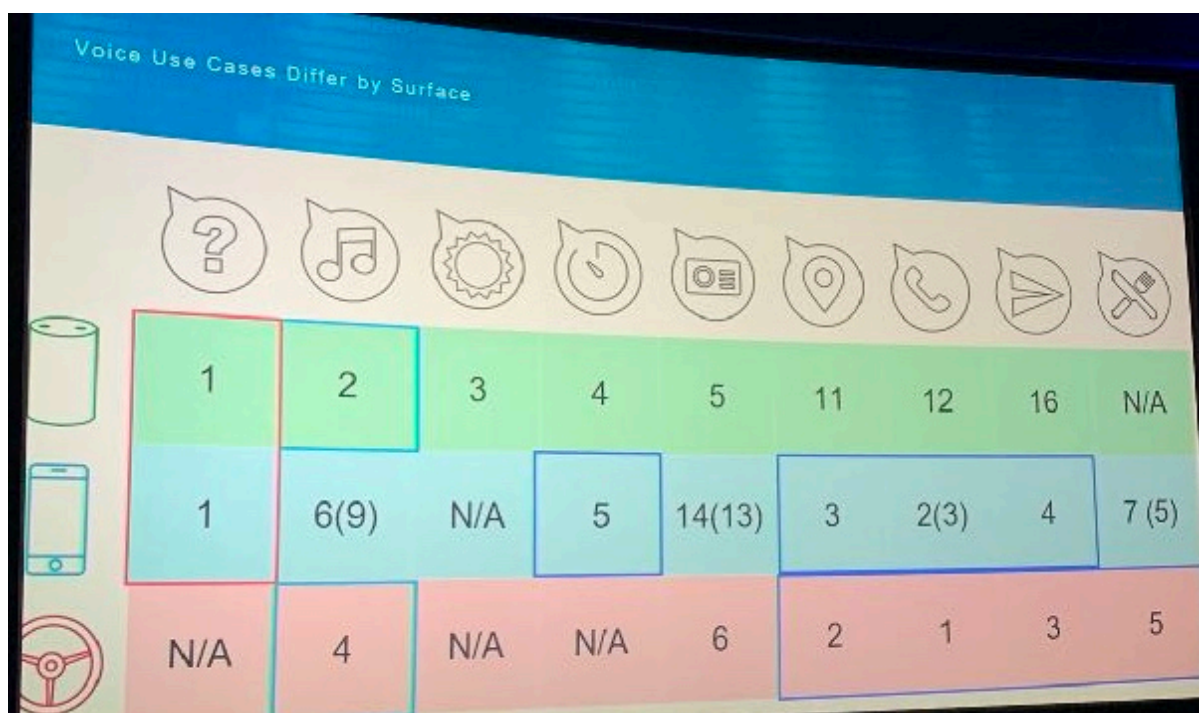
BRETT KINSELLA. VOICEBOT.AI

Nobel prize winner: asked about AI. I've spent entire life thinking about human foolishness

Surfaces: every possible device
 Echos are well known now.
 Jaguar S-type had it in 2000.

Phase 1 - Voice deployed.
 Siri was a Voice User Interface (iPhone 4S). A feature with existing apps.
 Echo released in Autumn 2015. The first real assistant. Far field microphone, etc.

Phase 2 - voice everywhere 2018.
 2019 - renewed focus in voice outside the home.



The number in each box is ranking (1 is most popular, lower the number least popular). In cars, mainly used for directions, etc.

Use cases are different for all devices. Frequency of use, etc.

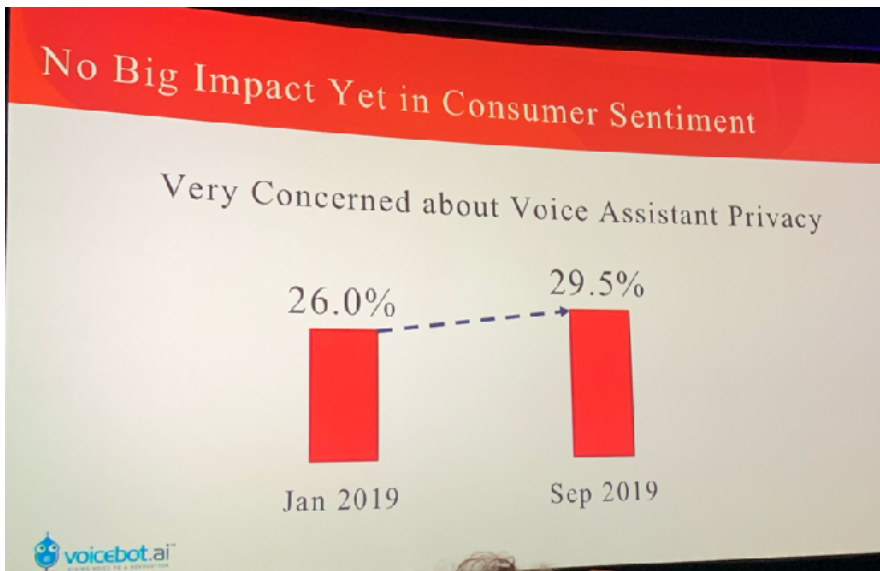
Need to think about the different contexts and how to 'train' behaviour.

Nationwide Insurance giving away 1 million Echo Automotive devices to customers. How will they get them to connect with their business? They're hoping people will ask Echo Auto.

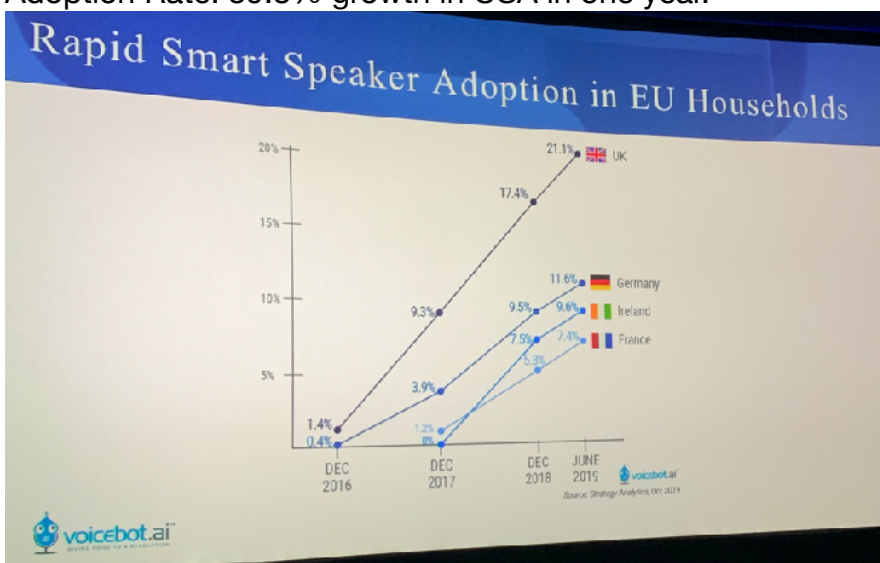
Troughs and backlash?

Gartner hype cycle. We're in trough of disillusionment now. Slope of Enlightenment is next, then Plateau of Productivity.

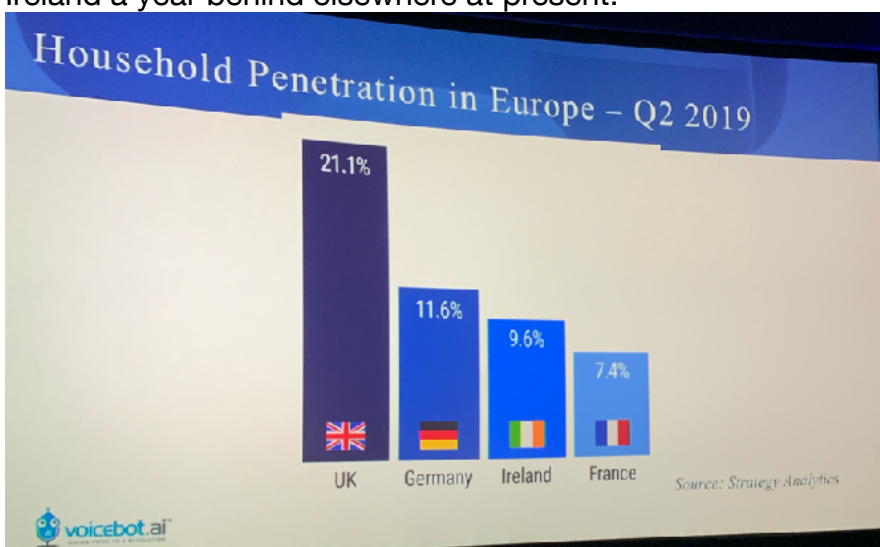
Devices listening. (Apple, Amazon, Google all got some backlash). Only in limelight now because people care. No one cared three years ago. (even now, only a tiny uptick in concern)



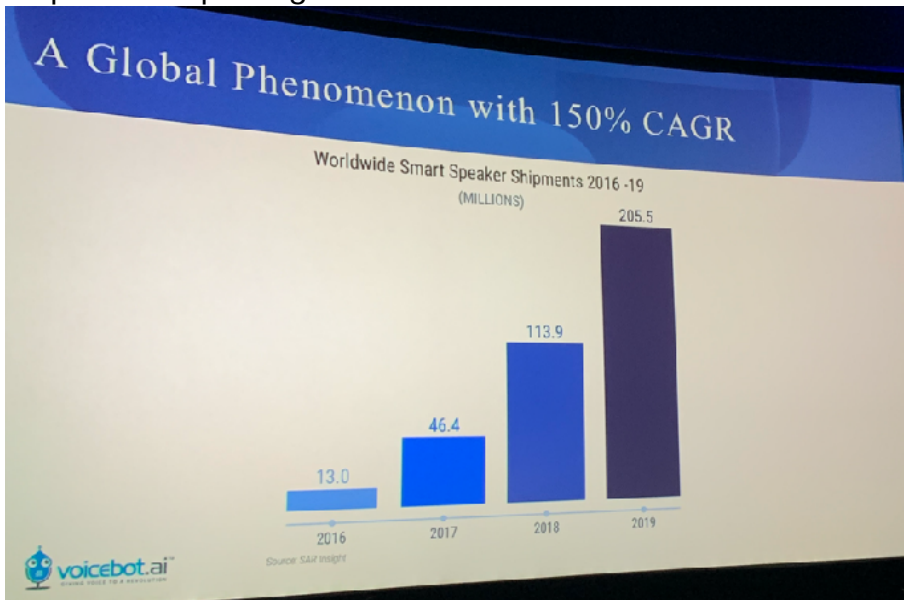
Adoption Rate: 39.8% growth in USA in one year.



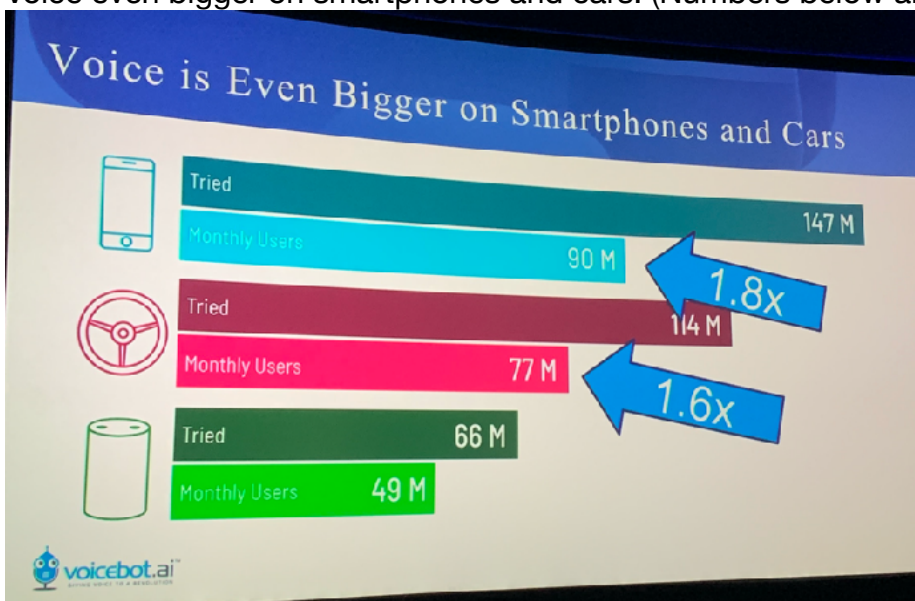
Ireland a year behind elsewhere at present.



Shipments exploding



Voice even bigger on smartphones and cars. (Numbers below are USA).



More than 2 billion devices globally (not including China - huge adoption there). 1.5 billion are mobile devices.

Microphones are everywhere!!

Some global assistants, also regional assistants.

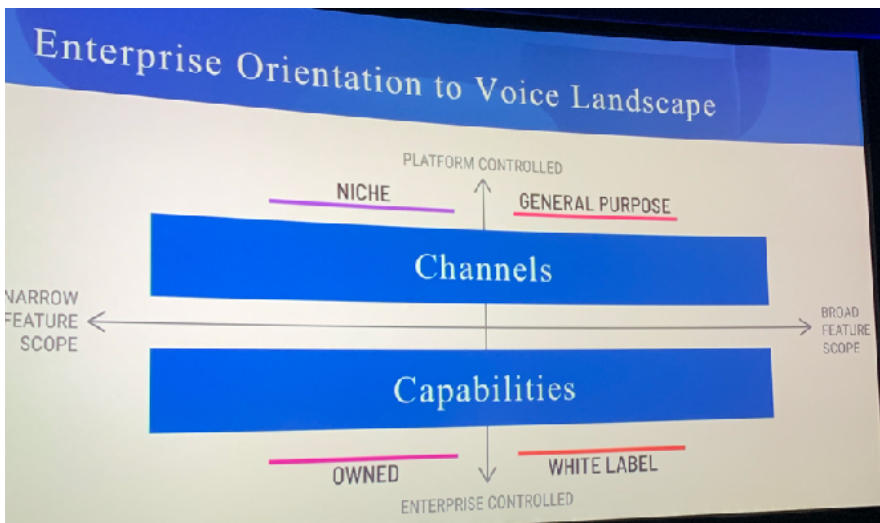


Every 12 years a new interface evolution. Click, Touch, Speak. The interface was platform dependent. With voice, it's not for the first time: across any device.

	DESKTOP	MOBILE	SMART HOME
AVAILABILITY		GOOGLE / APPLE	AMAZON / GOOGLE
ACQUISITION	AMAZON	AMAZON	TBD
AUTHORITY	GOOGLE	GOOGLE / APPLE	AMAZON / GOOGLE
ATTENTION		FACEBOOK / GOOGLE	AMAZON / GOOGLE

Winner takes all with Platform Shifts. (Hence Amazon with 10,000 working on Alexa).

For something new: Agency. Assistants will do something on your behalf. Google Duplex and Amazon Ring.



Steering wheel is the interface of the car. With voice, there is a direct interface.

See www.Voicebot.ai for lots of research reports.

McDonald's have touch interfaces and takes 50 seconds. Added voice and it takes 4 seconds.

What are new opportunities? Agency. Becomes personalised, learns your preferences.

Voice industry and voice assistants. One is a subset of the other (assistants). Companies aren't getting this yet.

Israeli company doing speech recognition for domains (e.g. physics) to show sign language for lectures. Also a Belfast based company?

Privacy. Consumers (perception of privacy in place?), regulators, media (ignore, cant do much). Consumers say they care, but they don't really. They're rational. (Also, location services much lower). Consumers make a trade-off.

Number one thing consumers say is they'd use assistants more if they understood them better.

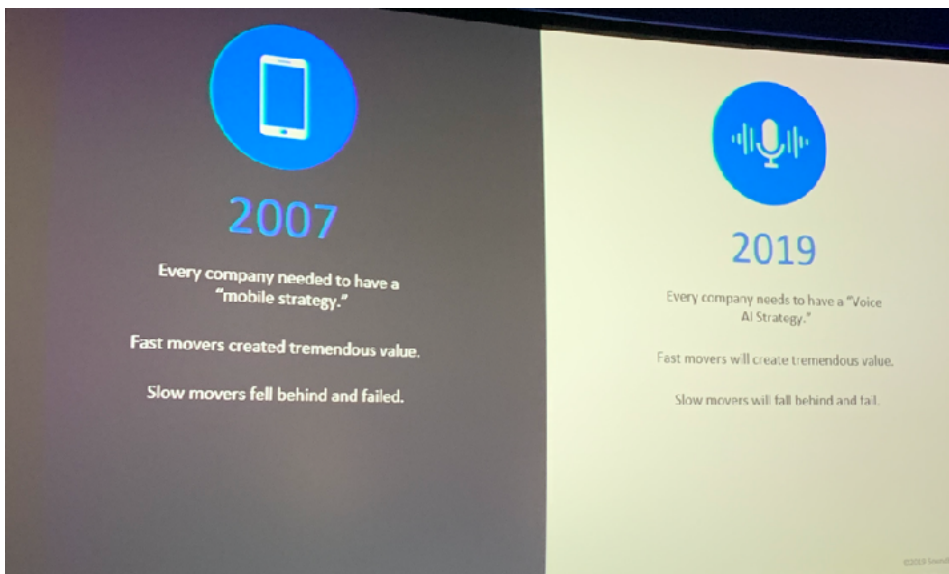
Companies acknowledge they have to be where the consumers are.

Audioburst - real time indexing of audio (radio and podcasts). Annotating this unstructured data. The google or audio data.

Engolio - big funding round.

A new voice world

KATIE MCMAHON, SOUNDHOUND (VP AND GENERAL MANAGER). (STARTED WITH SHAZAM).



E.g. Facebook missing mobile.

Voice interface need to be able to handle human garbage speech, all over the place.

Biggest adoption ongoing with senior citizens of voice assistants.

SoundHound is pushing to own your brand. "Ok Peugeot", "hey Mercedes", etc.

Houndify processes each word immediately for meaning. Allows multiple contexts.

Where We Are Headed?

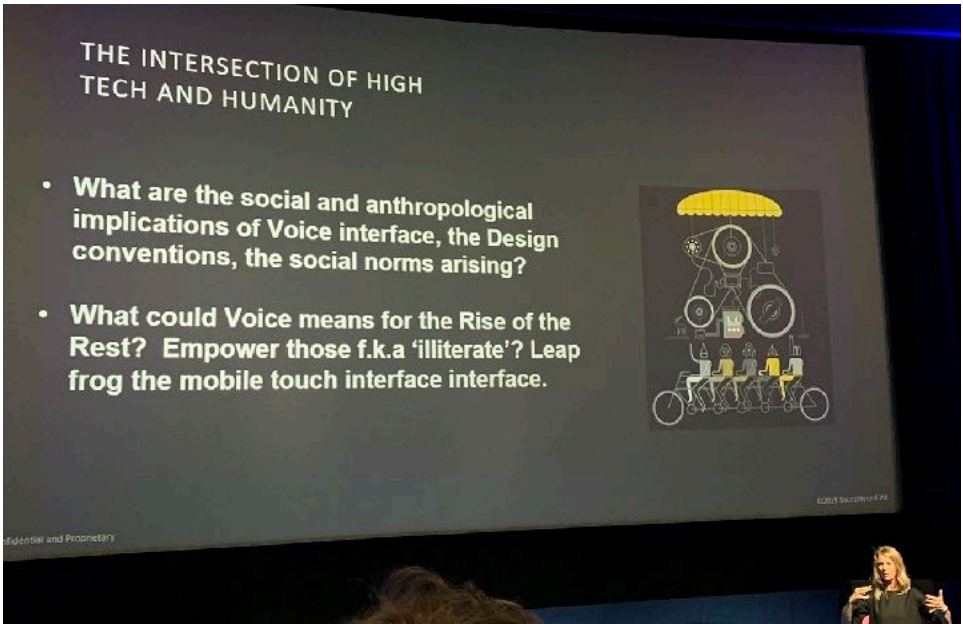
"Wall Street Journal": The Ultimate Learning Machines.

human babies are best learners in the universe. How do they do it? And could we get an AI to do the same? Project 'mess': model building, exploratory, social learning systems.

Generation Voice - Gen V

Born 2012 onwards, growing up with voice enabled devices.

(Same as kids born after smartphone explosion).



Mercedes promo ad. (From Super Bowl).

There's yet to be a Johnny Ive of voice interfaces.

Observation from attendee (from UCD): sense that UX not focused on. Still haven't resolved this yet. Enterprises are still leaning on SoundHound for assistance here.

Getting started with Voice Strategy

KATY BASS, ALTAVOX

Voice is 'surface independent': cars, speakers, rings, 'hearables'.



Tequila Patron. 6,000 users per month.

Using voice to facilitate transactions. Starbucks seeing more usage of voice and decline of app.

Enhancing customer experience: KLM used their own staff for recordings. (Recorded multiple staff and it blends answers).

Product Integrations: Mercedes, HP, Nike (voice activated shoelace), Nest, iRobot, Levi's jacket. Voice activated tie.

Improve operational efficiency: KPMG (way to check stocks), JLL (ask Hr to book rooms), Voicera (transcribes meetings), Einstein, MyCareerFit (apply for job through voice assistants), Funeral Care Home (wearing gloves while embalming).

Note: Mechanics would LOVE this!



Discovery: word of mouth is still biggest way to hear about Skills. 43% discovering through social media.

Using Voice Enabled for MOT tests

RALPH DREWNOWSKI, @DREWNO_DESIGN

10% of UK population is dyslexic (British Dyslexia Association).

One garage in Wales with two testers dyslexic.

One uses a Surface tablet with Dragon Dictation. He wears a headset. Fills in word document by dictation.

SVG is screen reader accessible.

Built demo in Adobe XD.



Practical Implementation of Conversational Tech in the Enterprise.

CHRISTINE GALLOWAY, WORKGRID SOFTWARE (STARTUP OUT OF LIBERTY MUTUAL)

Workgrid Assistant. Smart notifications, micro apps, chatbot

Digital Literacy requirement is much lower for conversational interfaces. (I.e we know how to ask a question).

Low hanging fruit in enterprise: knowledge management, task automation, self-service.

Best practises learned:

1. Discover value early.
2. Build Analytics: careful with some though as may be asking about maternity leave, etc. (If people start questioning what is logged, it's already too late)
3. UX matters.
4. AI is not magic.
5. Keep evolving.

Implementing conversational assistant in customer interactions

Chris Wicks (Conversational UI and Voice UX consultant, Accenture), Gillian Armstrong (solutions architect, Liberty IT), Conor Cirillo (Global Marketing Manager, Hubspot), Oisin Ryan (CEO, Service Dock)

Going too big too soon and trying to do too much is what kills bots.

Day One, you have no data.

Set it and forget it also leads to failure. Need to stay active and listening or watching user usage and feedback.

Lack of people with skills to design chatbots. We're in the Geocities era!

Multilingual is a big challenge. Different requirements in different countries also: e.g Germany, much earlier to give out info at outset of conversation.

Opinion is always disclose when chatting to a bot. Sets expectation with customers, etc.

Be super deliberate with what you automate first. Dip your toe in. Only one shot to get interaction right.

Trend towards voice being seen. Why promote a chat not on IVR when you can just intercept the call into a voice bot.

How do you get increased uptake? Sometimes using SMS to send a link. Also doing A/B testing with subsets of users.

Lessons on product market fit as a conversational tech startup

CORMAC O'NEILL, CEO WEBIO
EMILY ROSS, INK VINE

Cormac was an accountant from Louth. Third business is Webio. Granite Marketing also his business.

Some big customers have automated 40% of conversations. However if too complicated, customers end up in a loop.

People being more honest when talking to bots. (E.g when will you pay credit card bill? People under less pressure to reply to a bot).

Bots have profanity filter (works both ways: contact centre staff, and customers)

Also a bot to recognise when talking to a sensitive/vulnerable individuals, then transfer to human operator.

Lots of requests from businesses for WhatsApp For Business.

Voice interfaces are inevitable, 5 years will be normal.

Building Conversational Strategy at the BBC, lessons and challenges

ED HAILSTONE, EXEC PRODUCT MANGER, BBC

230 million iPlayer requests per month. 426 million weekly audience reach. Global record for IP-based users.

2nd employee of BBC was in R&D.

New world is editorial and tech are having to come together.

Questions: what do people feel about their lives and the role of AI and tech? How could AI improve their lives?

AI isn't understood in most markets with exception of China. In China, it's part of their progress narrative.

UK citizens look to strategise, globally it's to optimise.

Alexa:

1. The Inspection Chamber. You choose the story (multiple endings).
2. BBC flash briefings (very popular, 58 million uses)
3. Radio, podcasts (one squad to build whole product). Limitation of where you ask Alexa to ask the BBC what song is playing
4. CBbeebies skills (games, stories, sing and dance).
5. The Unfortunates. 17 different sections which can be played in any order.
6. India Election pilot, UK Interactive News. ("Next article please", "tell me more")

Tools: BBC built their own tools.

Voice & AI Strategy. Alexa and Google have stranglehold. But cause technical challenges: no access to devices, different context for each assistant (including Siri). They are also mediating in between BBC and customers (same problem for others).

Balancing act: Attribution versus Discovery & Ease of Use. (Want people to open iPlayer, not just play Blue Planet).




Now building their own assistant that will be for public services.

Personalisation & Recommendations (they're public service so can't have bias)

1. Maintain editorial content
2. Burst filter bubbles
3. Get you the right content.

Using DeepFake to personalise news.

Most popular Alexa skills (from 2015). Its early days!



Rank	Skill	Ratings	Average	Total Stars
1	Thunderstorm Sounds	13,223	4.9 Stars	64,792
2	Sleep and Relaxation Sounds	9,582	4.8	45,993
4	Rain Sounds	7,463	4.9	36,568
5	Ocean Sounds	4,757	4.9	23,309
6	Spa Music	4,498	4.9	22,040
7	Ocean Sounds 2	4,181	4.9	20,486
10	Healing Sounds	2,554	5	12,620
11	Distant Thunderstorm	1,840	4.9	9,016
12	Babbling Brook	1,825	4.9	8,942
13	Rainforest Sounds	1,603	4.9	7,654
15	Heavy Rain	1,526	4.8	7,324
17	Morning Music	1,363	4.8	6,578
18	Beautiful Dream	1,099	4.8	5,275
20	Rain on a Roof	1,031	4.9	5,051

Conversational Media: the road behind and the road ahead

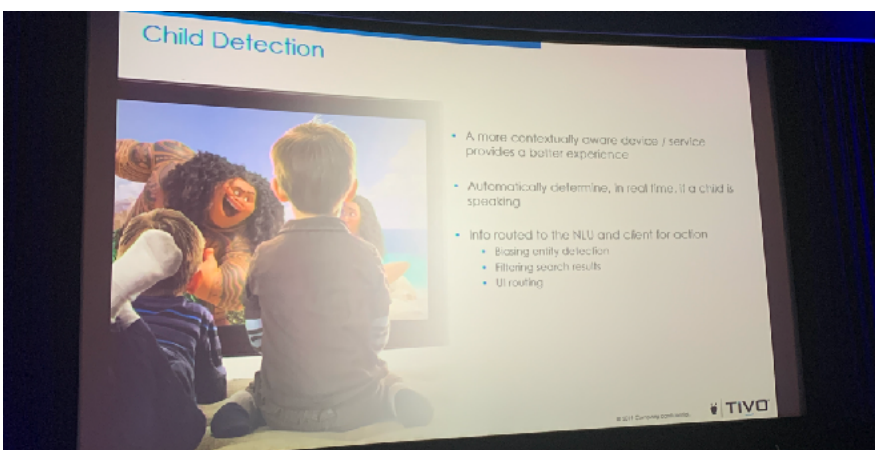
PATRICK BYRDEN, TIVO

Vodafone search and recommendation from TiVo. SlyQ also by TiVo.

Used to be basic, “play La La Land” or actions “slip forward four minutes”. Now “show me all movies directed by XYZ”

Sky ad promoting voice interfaces: usage up by 25% in four weeks.

Personalisation can reduce churn by 60%



Questions: will we end up with assistants interacting?

TV UI has gotten harder. Older individuals finding voice useful here.

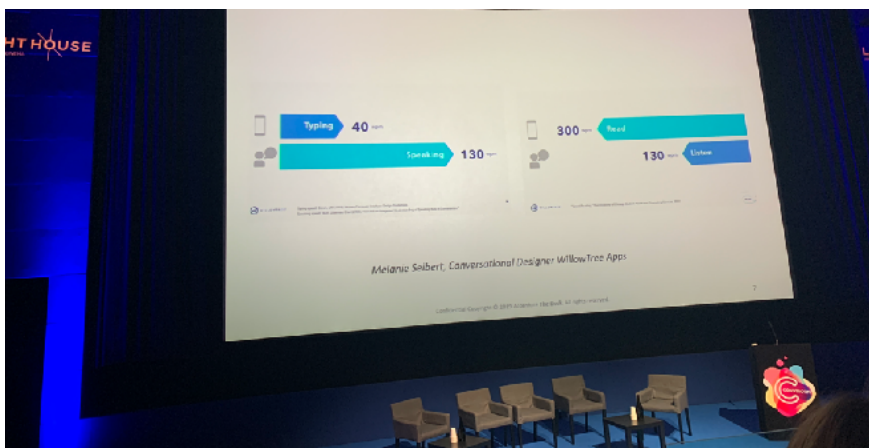
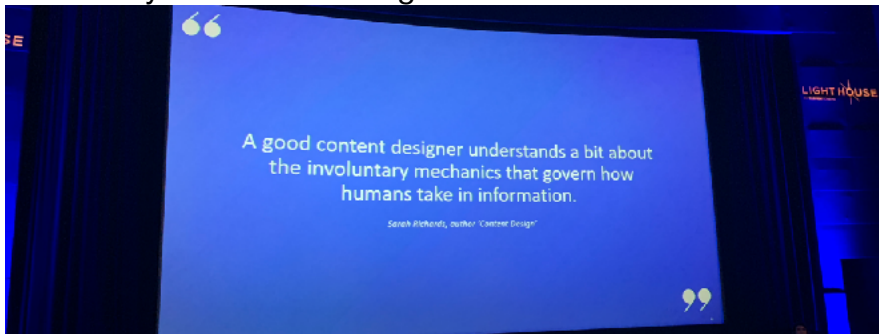
Building Conversational Strategy at Accenture

GRACE HUGHES, SENIOR CONTENT DESIGNER, FJORD (DESIGN TEAM OF ACCENTURE R&D)

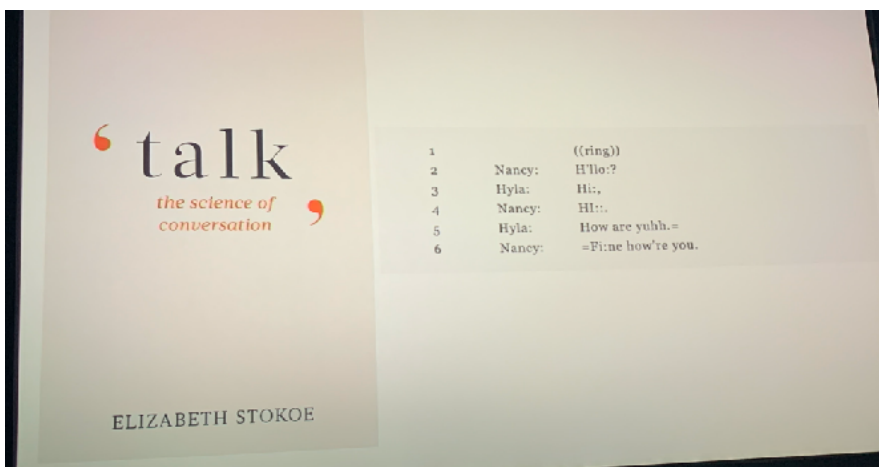
Conversational design is a whole new frontier.

‘Future Conversation’ project. What do we really know? How to bridge gap between design and tech.

Sarah Richards, ‘Content Design’: “a good content designer understands a bit about the involuntary mechanics that govern how humans take in information “



People have different responses to male and female voices (frequency, etc)



Questions:

1. Does human-like == human-centred (e.g Google Duplex). Should we make them human-like? Uncanny valley, etc.
2. Are we moving towards flat design with conversational agents? Will the language or way of communicating change as experience evolves?
3. How can we embrace the advantages of this modality? (E.g question received by voice, but reply with text or media) or referencing same item of people may prefer to talk to a bot over a human. SimSensei and MultiSense: virtual human for healthcare support
4. What does empathy mean in this context? (Accenture capturing memories from elderly as social good). Another is Alexa 'frustration mode'
5. How does branding fit in?
6. What do ethics have to do with conversational design?



Also around responses to queries. ("You're pretty", etc)

7. What kind of teams do we need?



Relevant comment everywhere.

For a long time, only technology people creating these. No conversational designers, linguistics, etc.

Grace.hughes@fjordnet.com
@gracehughes22

Let's have good conversations and intimate relationships

DIRK SONGÜR, MIXED REALITY, MICROSOFT

Talk about depression, and loneliness.

Depression: high rates with teens. Girls more vulnerable than boys. Linked to social media and television consumption.

There is also the positives: of in an online social group, of offline life is unpleasant.

We're rubbish at Moderation. (Facebook moderators, The Verge article).

Bots also play in same sphere as these other tools.

Like obesity now, loneliness is the next big epidemic.

Discovery, even a granny working Alexa without any demos.

What if we designed for relationships instead of transactions?

Should your DiaryBot call your best friend when it hears you crying?

Or if it notices you haven't reached out to anyone today - should it message or call someone?

Issues are access to privacy. Morals come before ethics. Prediction: These should be baked into frameworks and baseline capabilities, handled by OS or infrastructure layers.

'Woke' is a business model for brands.

There is now chatbot studies.

Use technology for Good and 'Brand' (play on word from 'bad')