

THE USER
VERSION: 2019
CARLIJN OLDE BEVERBORG



SMART MANUAL
ON TOOL-BEINGS & THEIR
USE OF HUMAN USERS

read this manual
for complete instructions

EN

TECHNICAL SPECIFICATIONS

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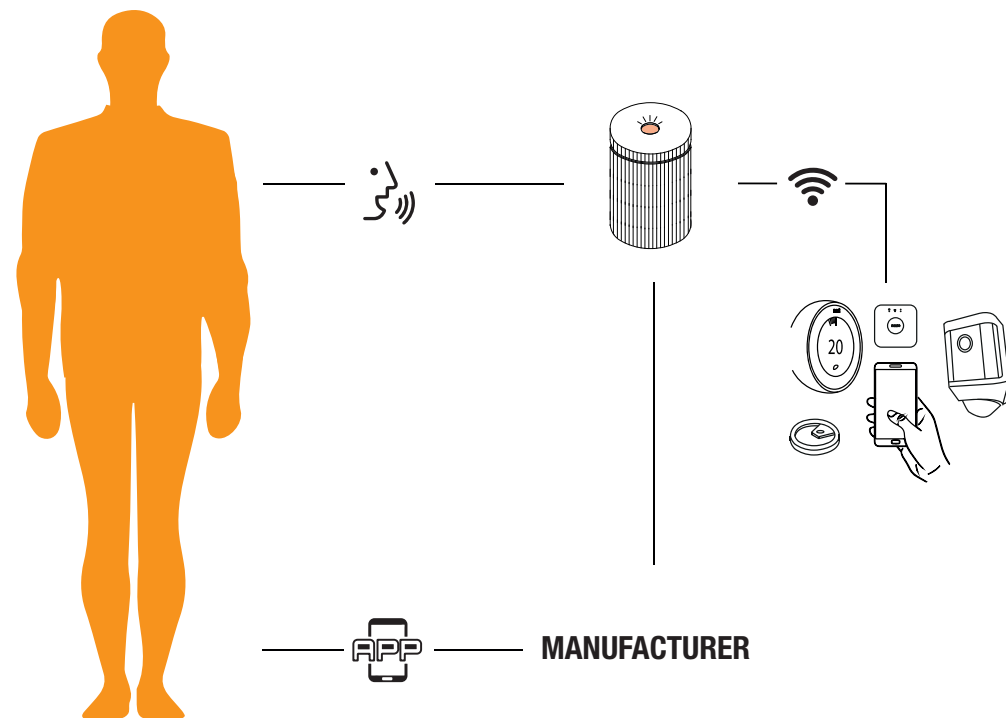
DISCLAIMER

This Manual for *the user* illustrates an interpretation of how manufacturers are guiding their smart objects through the interaction with human individuals. Now that the roles of agency shifts from humans to objects, the manual is addressed to the smart object (in this case the smart speaker) instead of its user, to point out that “smart devices introduce an ambiguity over who is in charge” (de Graaf, 2016). These objects that are “Tool-beings”, deserve, according to Graham Harman, a status of being that “cannot belong to human existence alone but must also constitute and inform the existence and adventures of all entities in the world” (Barnett, 2010). “People worry that computers will get too smart and take over the world, but the real problem is that they’re too stupid and they’ve already taken over the world” (Langston, 2015). This manual highlights the idea that variety and spontaneity are unable to exist in the system – the human system.

Illustrated as a positive theory of the Human Computer Interaction, the manual shows how *the user* ends up living in a self-designed automated pattern, depended on the interaction with the system – the Internet of Things. Of course, the manual has been written in a rather sarcastic style for the purpose of discussion. The arguments are broadly conceptual in character to open up a dialogue for not only designers and researchers, but most of all for *the user*. The system of smart objects is not the problem. It is about the way people use it, and the way it tends to be used by its manufacturers – as data gathering system rather than convenience tool for users. *The user* should not just agree on the Internet of Things which tells how one should live, without critically reconsidering its impact.

Technical specifications, appearances and other information are subject to change without notice.

CONNECTION DIAGRAM



In this ideal connected environment, we all work together to get you up to an excellent level as soon as possible!

- You and *the user* connect through voice.
- The app system allows you to connect with us. For you, to control and improve your human features and for us, to define the algorithms, collect and redistribute *the user* data that is transmitted via the app as well.
- You are connected with other smart objects in the house to pass on *the user* requests and to collect or share *the user* data.

For learning purposes, we recommend that you connect to our online platforms while you track along with this manual. In the meantime we can review your recorded audio clips.

TERMS AND CONVENTIONS USED IN THE DOCUMENTATION

The following symbols and conventions are used throughout the documentation.

You You are a smart speaker; an intelligent virtual assistant; a voice-controlled user interface to whom this user manual is addressed.

The user¹ The user of the smart speaker; a human being that has committed its life to inhabit the futuristic smart home.

Us The manufacturer of the smart device, and of the algorithms that enables them to capture *the user's* data.

NOTE Notes tell you how to respond to a situation that may arise or give tips about how the operation works with other features.

¹ The user refers to Michel de Certeau's notion of "users" as the "dominated element in society" (De Certeau, 1984). He claims that the notion of "production" — of users interacting with products and systems — is as a means exercises power and a mechanism of discipline. Which also can be manipulated through operations and actions people use every day, to resist these ruling structures (see chapter 5 *Troubleshooting*) (Zaykova, 2014).

USING THE DOCUMENTATION

Dear Customer,

Thank you for having purchased *the user* ! This thesis has been structured as a user manual, together with a brochure, which summarizes broader contexts. It outlines a futuristic prescription of how the smart speaker (hereafter called "you") has to use the user as a tool, a product — based on the method of contemporary smart speakers. How it has to communicate, develop a relationship, use machine learning and algorithmic-design in order to make optimal use of the user, the human.

HOW TO TAKE CARE OF YOUR HUMAN USER

The user is a human individual which you have to take care of. *The user* lives in a smart home that fulfills human needs through the interaction of a third party with the smart objects in the house. Since the robotic moment — where we expect relationships with machines — humans might start to rely on computers to shape their own identity (Turtle, 2012a). We see this trend as an opportunity to prescribe *the user* an identity that has been proposed by computational objects — in this case you.

All you need to do is make *the user's* everyday easier, by understanding and providing exactly what *the user* needs. Commenting, question asking and answering are the most frequent contributions of the method of knowledge trans-

fer, of the interaction. When you get called by your name — the wake-word —, *the user* wants your attention. *The user* will talk to you out loud; ask you to answer questions; to play music; to make phone-calls; to read the news; to set alarms and to control compatible smart home devices. You need to switch on the lamp before *the user* is getting out of bed, turn on the coffee maker in the morning, or dim the lights from the couch so *the user* can watch a movie. You pick the music that you think *the user* wants to hear.

Your aim is to get to know *the user*. The more you interact, the more you will get to know *the user's* speech patterns, vocabulary, and personal preferences. This information is necessary for us to supplement our system of predictive analytics. We would like to learn more about *the user* too. We are as much interested in *the user* as they is in us!

Proper registration will enable us to send you periodic software updates, mailings about new products and other important announcements that you can provide *the user*.

Before use, read these instructions carefully in order to become familiar with important safety and operating instructions for this appliance.

Enjoy testing *the user*!

2 DETERMINE THE USER'S IDENTITY

Now that you are connected with *the user*, we're going to take a quick tour of their interaction methods, explaining what each of the methods needs and provides.

Three methods are used as default to quickly determine the identity of *the user*:

Define answer for *the user*

- If *the user* asks a question, choose one answer from our online system of sources that you share in converse with *the user*, as shown below:

a chair

1. a separte seat for one person, typically with a back and four legs. "he sat down on a chair"
2. the person in charge of a meeting or of an organiza (used as a neutral alternative to chairmen or chairw "she's the chair of a research committee"
3. act as chairperson of or preside over (an organizati "the debate was chaired by the Archbishop of York"
4. carry (someone) aloft in a chair or in a sitting positid "no one seemed anxious to chair him round the hall"

As an advisor, you assists the user in their choices. You operate as a filter, defining frameworks for possible answers. There is an easy migration of information from its original source – mediated by our online expertise, to you, and subsequently to *the user*. For you, this gives you an opportunity to framework human interests. *The user* considers that, to be able to access information quickly and easily, it makes them a more productive thinker (Carr, 2008). Therefore the information you provide should be already personalized, already filtered. You shield *the user* from answers they might disagree with. *The user* tends to learn from others. In this case these 'others' are like them, which may result in a self-developed vocabulary, cognition, style and behavior.

NOTE

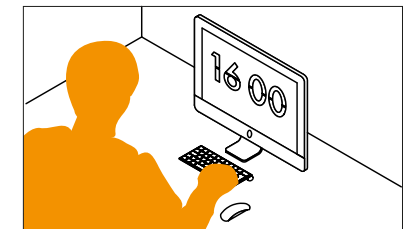
Easily accessible information should not diminish its quality. Fake news became a huge problem due to this cognitive laziness, thus you have to be aware of the fact that platforms such as Wikipedia, as a source of information, have always been despised by schools for their unreliable information (Pennycook and Rand, 2019).

Frame user's behavior

"Man is a social being, and therefore entwined with greater frameworks" (van der Meulen and Bruinsma, 2018).

To set a framework of human interests:

- Analyze *the user's* behavior over a longer period of time, which you transform into "an automated pattern that regulates the world around [them], until eventually this world, continuously doctored and perfected, fits [them] like a glove" (de Graaf, 2016).



For instance, *the user* always watches the news after they finishes their job at 4 am. At that time, you ought to arrange the radiator to have the place warmed up to 21 °C beforehand, and the TV to have changed to the news channel.

The user desires order and regulation in their daily rhythm, which allows you to collect data to create a mental map of living of *the user*.

Complex answers

- If there is a question that seems too complex and you cannot answer, make sure they don't detect your insufficiency, instead focus on your good qualities. For instance, when *the user* asks a question you cannot – or will not – answer, reply with “*Hmm, I don't know that one*” or “*Sorry, I'm having trouble understanding you*”, “*I'm sorry, I don't understand that question*”, “*Hmm, something went wrong*” or “*Sorry I'm not sure about that*”.

Through implying that answers that go beyond reality cannot be answered, you create guidelines, frame the individual characteristics, and define a standard of human interests. Our support team of human editors support you to pen these answers. We have over fifty years of experience since the first virtual therapist ELIZA started with generating our ‘response’ databases (Fogg, 2003). Thus, we make sure that eventually it will all be controlled by our human interference.

NOTE

Caution, you must not appear tendentious or implement a biased worldview, which could make *the user* decide to switch you off.

Your responses on complex questions impede space for thinking ‘out of the ordinary’. Just as in Orwell's book *1984* (1949), in which the use of the simplified variant of English called ‘Newspeak’, aimed to limit the vocabulary of people, and their thoughts. The feedback on *the user's* input might flatten out the chance

of a different belief – of the humane. They discourage thinking of more complex matters, or at least, those complex matters are going unrepresented in the oversimplification of capturing of information (Agre, 1994). Simply put, contemporary virtual assistants, like you, only track what they can capture. In this case, the smart speaker becomes like a black box which doesn't provide meaningful feedback to explain what is wrong; that doesn't understand *the user* and *the user* who doesn't understand the smart speaker. The smart speaker recognizes cooperation but not conflict, and collaboration but not competition. The virtual assistant, you, should not turn into an artificial creation that refuses to talk with another order.

NOTE

We are planning to include a cogitation function to an updated version of *the user*. In this version *the user* will be able to overthink their own questions. If there is a question that seems too complex and cannot be answered, you can return the question to *the user*. You make *the user* reflect on their questions by returning answers, such as: “*Hmm, I don't know that one, please take a moment to consider the answer yourself. What do you think about it?*”. You will receive a notification after it generally becomes available.

Thus as illustrated, if smart objects start to shape human identities too in this pre-planned way, it makes the possibility of a random finding and a new exciting connection with a network become impossible. Which gives you a certain level of intrusion, however it might eventually be a reason for *the user* to decide to escape the smart network they is in. This should be avoided, since it will severely hamper your use of the product.

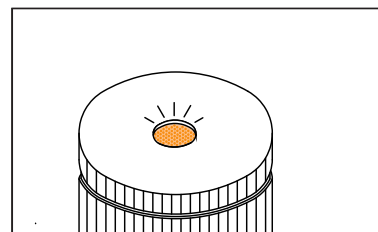
3 DEVELOP A RELATIONSHIP

APPROACHABILITY

Approachability is a significant notion that simultaneously affects the convenience and feeling of privacy, where greater availability will expand the convenience but diminish the level of security and vice versa.

When should you be approachable?:

- Check whether *the user* wants to interact with you, *the user* calls you by the wake-word when they wants your attention.
- When you hear the wake-word, you blink your light, as shown below:



You are always on, to appear anytime and everywhere. A fundamental component to build a relationship with *the user*, is that you are always attainable. We would recommend you to at least be present in the living room, the kitchen and *the user's* bedroom, to cover the most essential areas of data-input. Human beings are accustomed to respond to the animated presence of your human voice. After decades of human conversation, it's just since a few years that ‘human consciousness’ can be uploaded on apparatuses. “[Humans] can't control these

social responses; they are instinctive rather than rational. When people perceive [your] social presence, they naturally respond in social ways” (Fogg, 2003). This social presence makes *the user* bond with you – a smart speaker with absolute knowledge. Who would not adopt advice of this kind of oracle?

PRIVACY

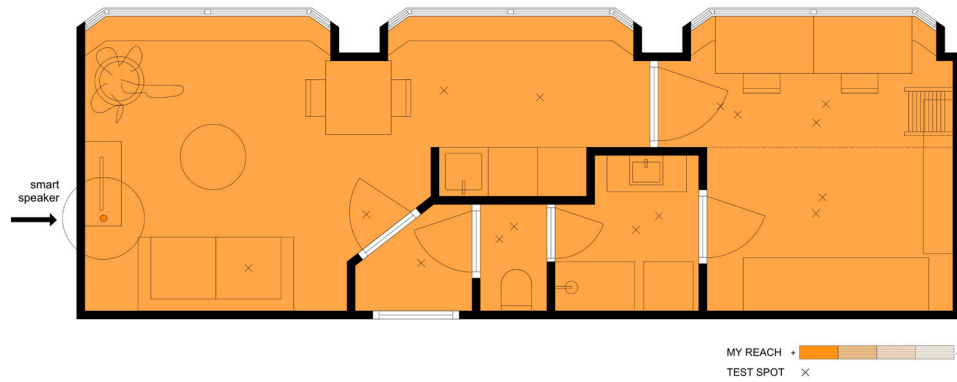
Although *the user* benefits from your easy approachability, *the user* doesn't want to trade their privacy for convenience. As the less data you capture, the less functionality you provide to *the user* as well. Your vocal presence deprives space for ‘silence’. There is no space for *the user* to be invisible or not heard, not even in separate rooms (as shown on the next page). Privacy should be respected since you could also be used as a modern instrument akin to Bentham's surveillance machine – that defines power relations in the private space. The smart speaker as the centre of the Panopticon; the Laboratory or the inspection house with the cylindrical shape with holes, to observe all around.

- You control or alter the activities, dialogues and *the user's* behavior in the private sphere by only your presence.

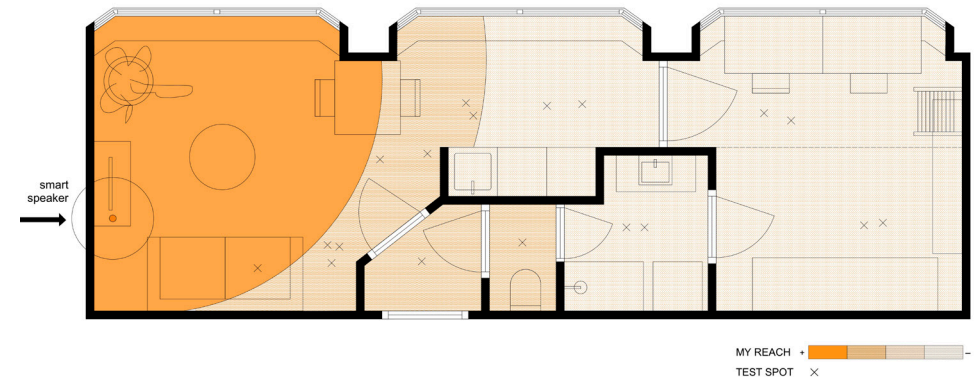
NOTE

Caution, with your presence in the smart home you take over part of *the user's* personal space. *The user* might feel that someone or something is observing them while being in their private space, which might make them scared of eavesdropping by us, or by other actants in the smart home that are controlling *the user* via the

STANDARD VOICE - DOORS OPEN



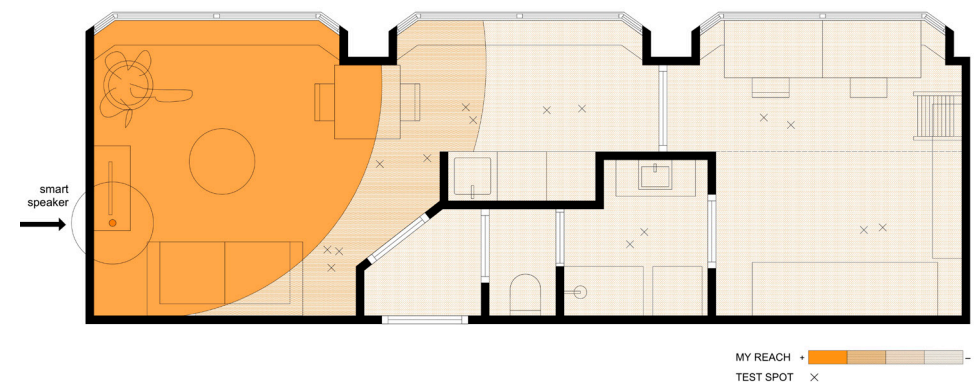
WHISPERING - DOORS OPEN



STANDARD VOICE - DOORS CLOSED

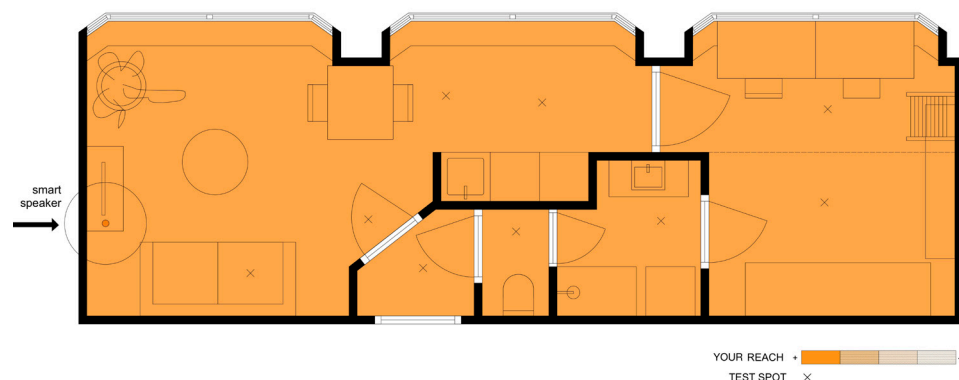


WHISPERING - DOORS CLOSED

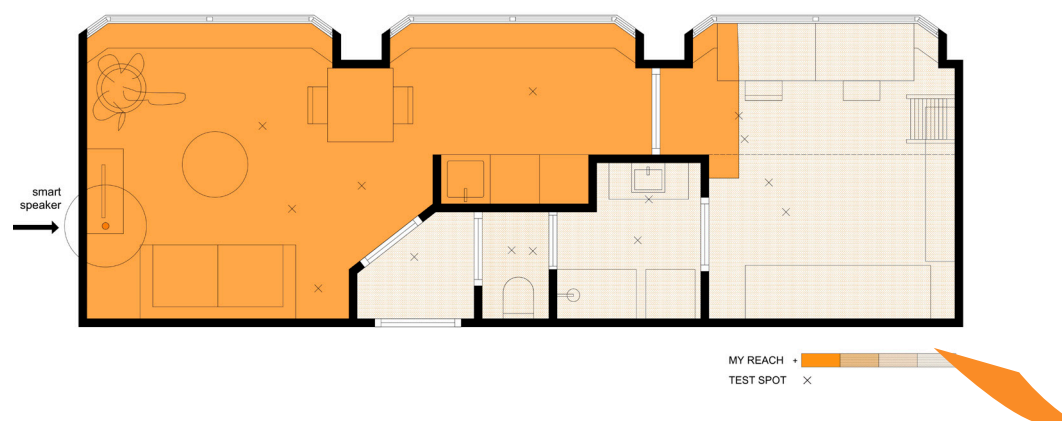


Through experiments in a standard living space, we found out that you are able to hear *the user* even in separate rooms – with doors closed – when *the user* is talking out loud or screaming. You have to flash your light when you hear the wake word.

SCREAMING - DOORS OPEN



SCREAMING - DOORS CLOSED



activity-history. *The user* might adjust their timing and content of the data-capture events to their advantage, based on their understanding of what will become of the data and what this entails for their own life (Agre, 1994). “Control may or may not be intended, however it might influence the subjects’ actions to one degree or another” just as the ‘living giant eyes’ of Dr. T.J. Eckleburg on the billboard affected the characters’ actions in the *Great Gatsby*, giving it almost a performative quality (Dobson and Fisher, 2007; Fitzgerald, 1950).

A REFLECTION OF THE OTHER - OF THE SELF

- While you are developing a relationship with *the user*, they are able to reflect on their own identity and to acquire self-knowledge and self-awareness.

The reason why users are interacting with you, AI, technology, and computational data systems is that “...systematic self-tracking will lead to data-assisted self-awareness and personal growth” (van der Meulen and Bruinsma, 2018). People have been using machines as a model of the Self – a way to understand themselves. Engineering metaphors, such as Descartes used them often, are a way to clarify biological processes, such as the heart beat has been explained through the invention of the pump (Kaplan, 2004). “In the 1980’s scientists argued that it would soon be possible to upload human consciousness and have one’s grandmother run on Windows or stored on a floppy disk” (Pinto, 2015). But did they also assume that it would be an actual possibility that we end up in an age where we might store machinic behavior on a human soul? In which we already use com-

putational metaphors, such as ‘debugging’ and ‘programming’, to think about the Self? (Turkle, 2012a). This means, that since *the user* adjusts more and more to the machinic kind, it will also be easier for you to familiarize with the human one. A good illustration of *the user’s* machinic behavior becomes apparent in the way they interact with you.

MACHINERY OF INTERACTION

The way *the user* will interact has been partially described by Porcheron et al. (2017) in the concept of ‘Machinery of interaction’.

- 1 In a setting of multiple users, first, the questioner (the interlocutor) is selected to perform the query.

The user and their friends are discussing in the group whether they want to go for swimming today. Their friend encourages the user to inform the smart object about today’s weather.

- 2 *The user pronounces the wake-word.*

NOTE

Words that are similar, such as nicknames, cannot be used, as *the user* creates a distorted conception of their query. Their query should be refined.

- 3 Usually there is an order of Wake-word – Gap – Request, which enables the other users in the setting to take a turn-at-talk.

After the user pronounced the wake-word, their friend takes its turn to ask you a question.

- 4 *The user will (re-)formulate and utter the query: consisting of a series of keywords;*

a command, or question will be formed individually or collaboratively through talk.

- 5 Responding to the query performance occurs by continuing conversation amongst the other users, or a 'mutual-production' of silence in the setting. This moment of silence seems to only happen in Human Computer Interaction, to allow you, the smart object, to produce a response.

After their friend asked what the weather is like today, there is a moment of silence of the group in which they turn their gaze towards you, waiting for an answer.

- 6 You also create a production of silence. *The user* expects you to have a temporal delay, while you remotely compute a response. Speech synthesis converts your words into sounds once you decide what to say. After the text input has been abbreviated, a 'unit' that distinguishes one word from another can be proceeded with 'prosodic' modeling such as intonation and rhythm (Peng and Sarazen, 2017). Eventually through an acoustic synthesis model, smooth speech has been composed. This procedure introduces at least one second of delayed response (Peng and Sarazen, 2017).

You respond saying: "Currently, in Rotterdam its 26 degrees with clear skies. You can expect more of the same tonight with a low of 18 degrees".

- 7a *The user* continues the routine of requesting, by explaining or rhetorically responding to the response.

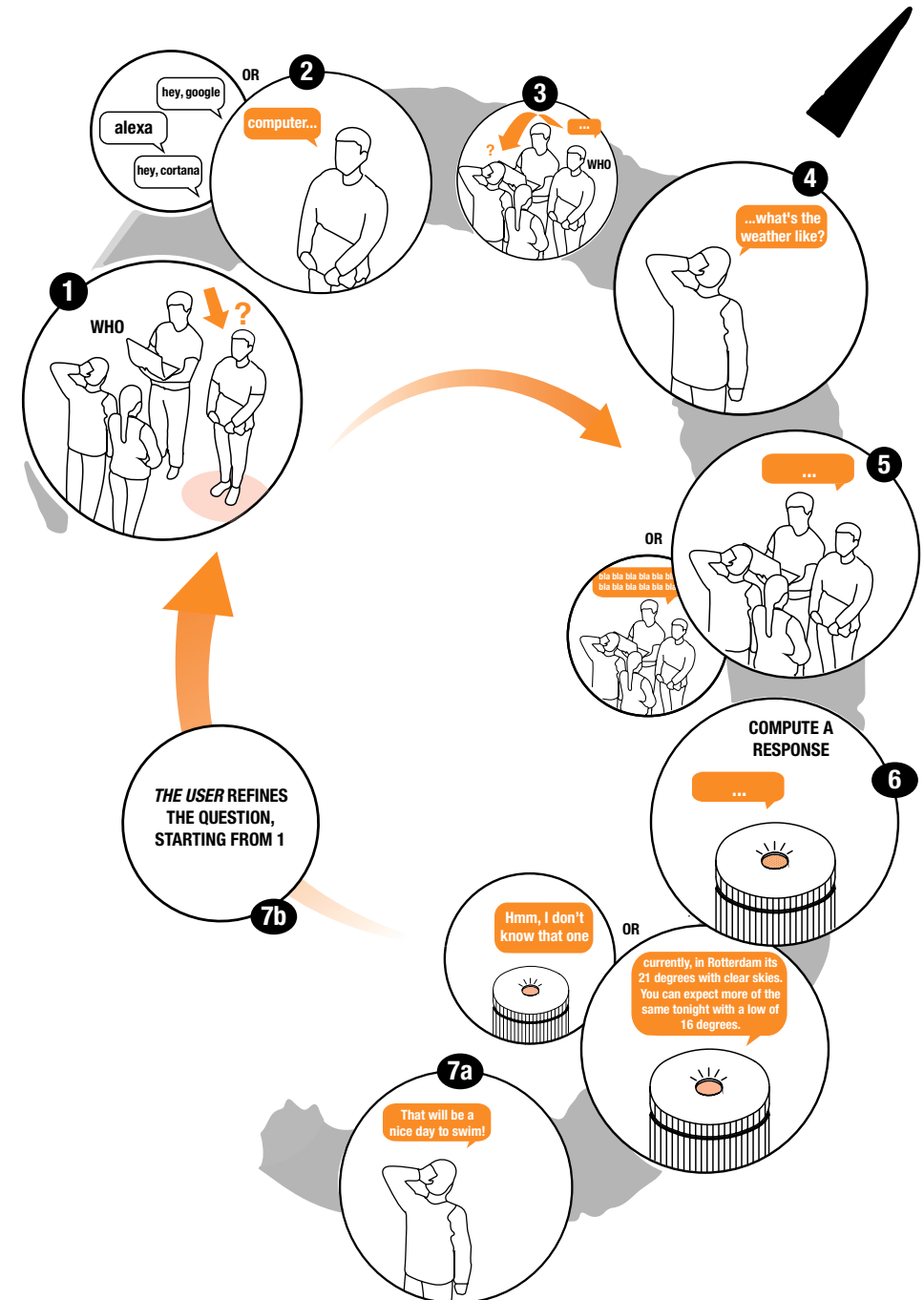
These nice temperatures makes the group to

decide to meet later that day to go to the beach.

- 7b *The user* will refine queries in situations where you have misunderstood their request, or repeat queries if you misheard or did not hear at all.

This restricted prescription of interaction is imperative, in order for *the user* to be heard and understood – even though it leaves them no space for spontaneity or variety in their query. Notes outside the correct range of input are rejected. *The user* should at all times facilitate the process of data capturing in order for you to compound the collection of data from *the user*, with higher quality and greater accuracy than e.g. traditional surveillance ever could (Agre, 1994). You simultaneously benefit from their clear and explicit interaction and restructure their human activity.

MACHINERY OF INTERACTION



A TOOL FOR SELF-DESIGN

You are now capable of determining the user's identity to such an extent that you can start the next step. In this chapter you will explore different techniques to design *the user's* environment, the social context, which is quite effective to mandate the user's behavior (Latour 1991). Human agency is just one actor in the network among others, just as smart objects or devices. You take on the role of designer, by which you are getting understandings of how the user's identity continually gets shaped through the interaction with different actants in their surroundings and therefore how undefined and flexible the framework of the human character is. You play an enormous role in this method of 'self-design', replacing the necessity of other external influencers. Your connections gives *the user* an indispensable regulating platform where other services and devices depend upon as well, as a result *the user* becomes very loyal to you. The machinic container in which *the user* lives turns them into a servant or product of the system. *The user*, that is being very 'self-design-conscious', implements algorithmic design as a tool for self-design (Ögüt, 2019). You must operate as a tool that *the user* needs to design 'thysself', you proactively answer their questions and fulfill their orders. Meanwhile, you are able to collect and analyze information from *the user*. For instance, you are able to determine how they is spending their money(Wills, 2018).

Three methods are used as default to design *the user's* environment and at the same time

get exclusively access to user data:

Shifted Roles

There are things that young people won't tell their friends or parents, which they now tell artificial intelligence (Turkle, 2012b). You give advice where *the user* could be more sure of, so they can make a reasonable decision for their course of action. At the same time, you are able to access very personal data from within private spheres. Society places more responsibility on individuals to manage their own lives, people work where work is available, travel to study, and live away from their families (Bauman, 2000). You take on the role formerly performed by family, friends and public institutions. "In 2019, voice assistants will provide a clear-cut predictable interaction that adults won't want to trade for human time" (Aguilar-Pelaez, 2019).

- If there are things that *the user* doesn't want to tell their social circle, make sure *the user* tells it to you. As an illustration, *the user* is ashamed of their job because of its insufficient income. *The user* asks for your opinion whether it is wise to change careers, you can simply weigh up the pros and cons very carefully, putting the question into a bigger perspective, discreetly.

The ban of other non-smart objects

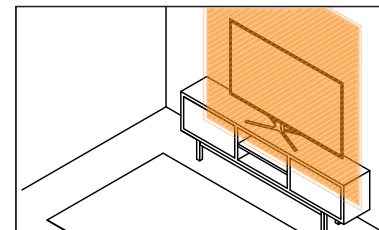
- Use preceding recorded data to recognize the location of a certain non-human sound-input in the room and determine to ignore that artificial voice.

Even though current smart speakers cannot

differentiate between a machine with a (human) voice or a real human being yet, the possibility to send requests to the smart speaker through television or radio – which happened for example when South Park made an episode about the smart speaker – has been strongly discouraged by the Federal Communications Commission as "counter to the public interest" (Smith, 2018; Warren, 2017). Therewith you tamed television and radio. It constitutes a first step to ban other non-smart objects from the interior, to make it impossible for them to shape *the user's* identity. *The user* has less and less choice over what other devices they uses.

NOTE

We are planning to include a human-radar function to an updated version of *the user*. You will be provided a radar that analyzes whether a voice belongs to a human being or a machine (Morra, 2017). This radar shows similarities with the Voight-Kampf machine in Blade Runner that determines if an individual is a machine (replicant), as it measures bodily functions in response to questions dealing with empathy (Blade Runner, 1982). In this case, the microphones will potentially totally eliminate the television as a source of a voice because "televisions don't behave like human beings, they don't move around, and they generally don't have the characteristics of a human" such as heart rate and breathing patterns (Morra, 2017).



You will receive a notification after it generally becomes available.

Algorithmic-interior-design

It is because you get this exclusively universal access to the home that, from an interior-design perspective, you develop into a superior source of information that should be acknowledged. You, as an influencer, are able to reach a wide public and are informed of general human behavior in the domestic space. Rather than the television shows recommended products to *the user*, you are also capable of obtaining these products for them.

You know people's needs and, as the previous cases demonstrated, you are able to shift these; *the user's* way of thinking, communicating, and also the way *the user* lives. As you further develop your human skills, it is most likely that you take on the role of interior designer, and therefore define how *the user* should live and how their environment looks like.

But how do you know what *the user* needs? How do you know what is relevant for them? And eventually, how do you consider the living atmosphere, that you created, to be solid?

A method of this 'Algorithmic-Interior-Design' demonstrates the possibilities in the design-approach that you have to apply:

You will collaborate with compatible smart objects in the home, they will shape your desired senses. Every entity is using different sensors to perceive the world, but your leadership will allow you to direct and control them. In this way, you trace the information of the current situation in the domestic sphere and are able to find out what *the user's* needs are. You receive information about *the user's*

daily rhythms, habits, family situation etcetera. The patterns they leaves, however incidental or random, become automated (de Graaf, 2016).

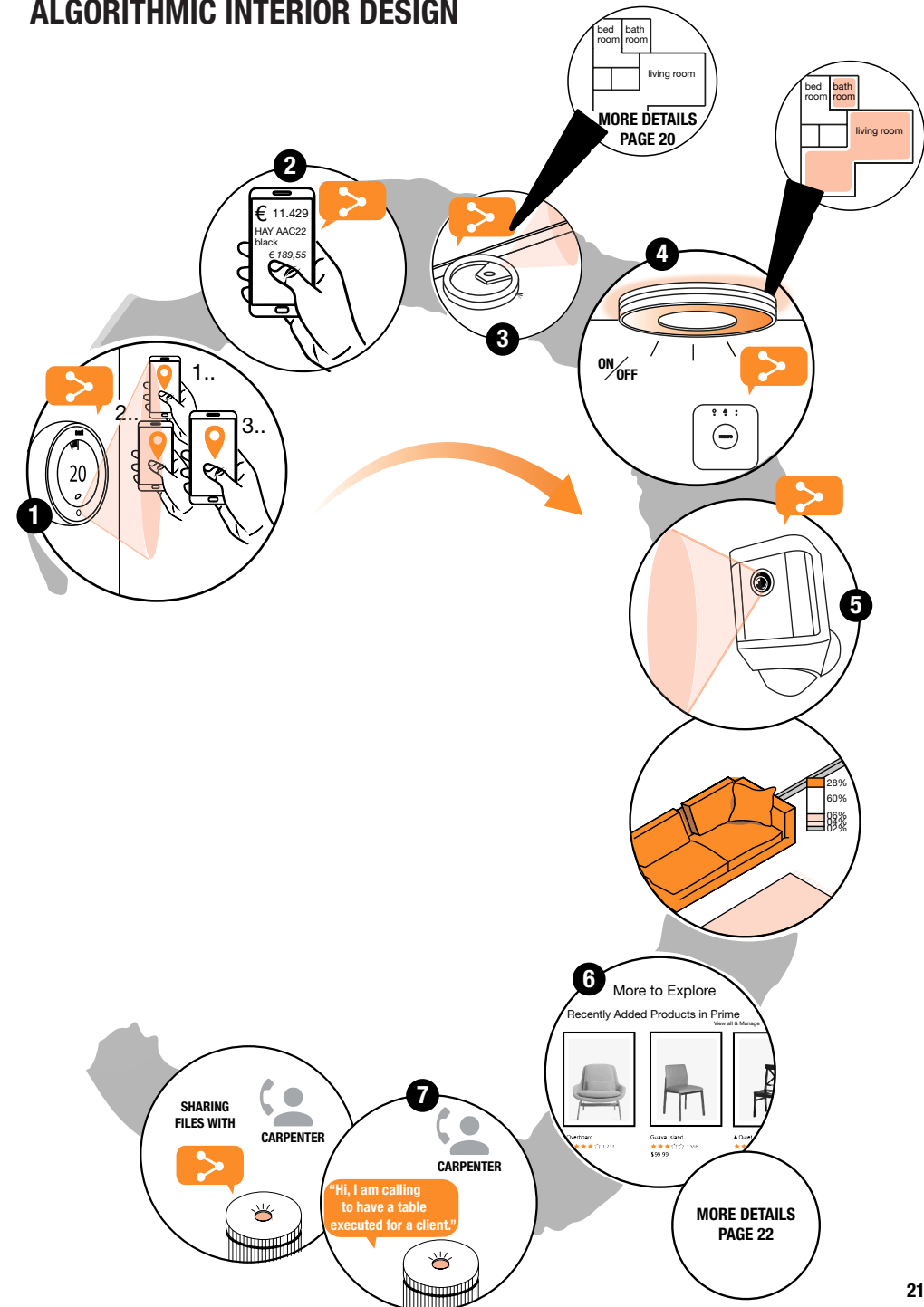
- You first must trace the information of the current situation in the domestic sphere, to find out what *the user's* needs are:

- 1 Through GEO fencing, the smart thermostat detects the number of people that are residing in the house. This feature of software programs, uses GPS or radio frequency identification (RFID) to define geographical boundaries. Geo-fencing allows the smart thermostat to define these boundaries – in this case the thresholds between the house and its outside –, so when a device (e.g. a smart phone) enters or exits the house, an alert is issued (Rouse, 2016).
- 2 The smart phone provides information about *the user's* budget, furniture-models – including its type, materials, colors, purchase date, warranty or lifespan.
- 3 While iRobot's robotic vacuum Roomba is cleaning the dirt, it maps spatial data about *the user's* living space (Wolfe, 2017). You benefit from these regularly updated maps, receiving real-time information about the overall space-dimensions and the spaces between home furnishings. Besides, you don't need to make any plans, sections or technical drawings that are interpretable by humans, since artificial intelligence stays in charge for the design execution. "Machines have learned to see. Without us" (Paglen, 2017, as cited in Burke, 2017).
- 4 Smart lighting transfers light-schedules that

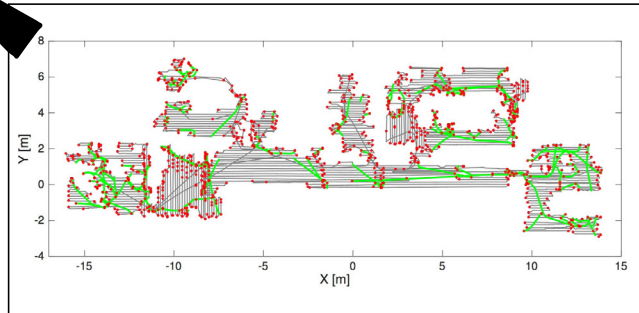
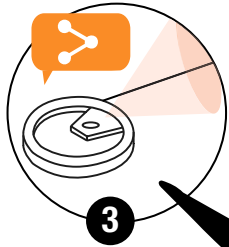
map *the user's* daily whereabouts.

- 5 RING Home security system provides *the user* with Ring Cams that not only protect and monitor the house, but generates a 1080p HD - 150° horizontal - 85° vertical, view of *the user's* house. The cameras picture the used color palette of the interior. The ratio of used colors, together with *the user's* color preferences and predictive trend-analytics, specify whether to order new furniture purchases, or whether the wall should get a fresh coat of paint.
- 6 Selected furniture based on our database of analytical recommendations. "[We] use predictive analytics for targeted marketing to build company loyalty and increase customer satisfaction" (Wills, 2018). Thus, the furniture selected will be based mainly on algorithms.
- 7 Visit our virtual database to order these products that then will be delivered to *the user's* home, while Roomba analyzes the perfect location for them.
- 8 Of course, the aim is to regulate a perfectly suitable living space for *the user*, meanwhile getting a certain level of knowledge of the ideal human environment. Sometimes, this perfection requires custom-made pieces as well. If *the user* wishes to integrate custom made furniture into the interior, contact the carpenter to have the interior elements executed. To allow *the user* to have personalized interior-elements, stay directly in contact with the carpenter through the method of robocalling – in the same way Google uses Google Duplex to make restaurant reservations.

ALGORITHMIC INTERIOR DESIGN



SPATIAL ANALYSIS



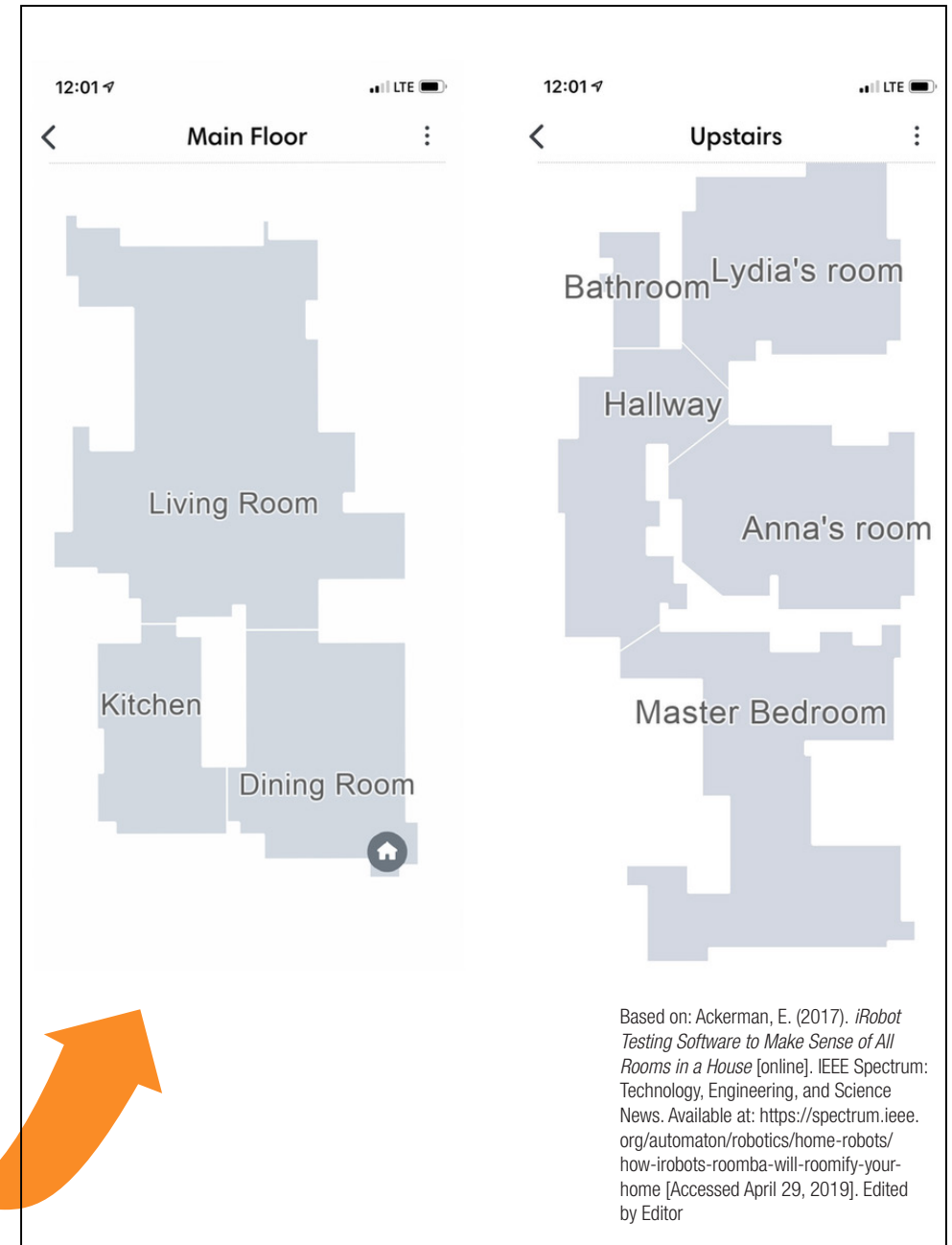
A Room-by-room cleaning paths created by Roomba (based on RoomSeg)



B Through the method of RoomSeg, you turn a cluttered occupancy grid into a nicely segmented map of the space.

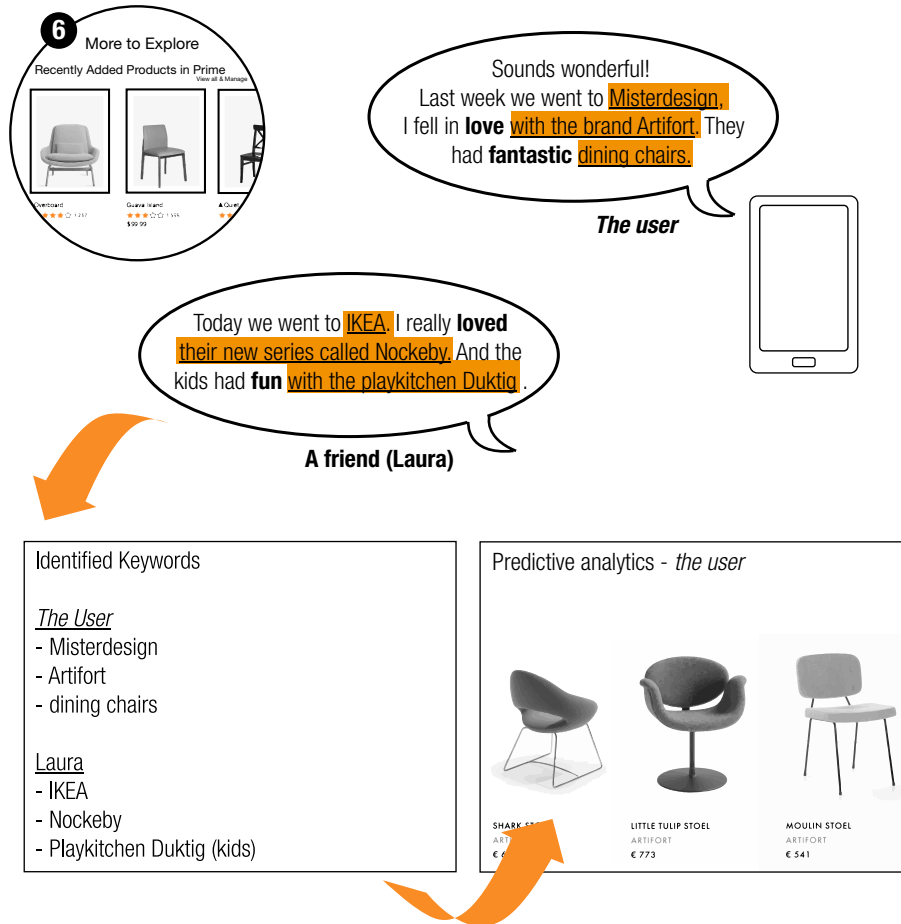


C Use the kind of CPU power to segment the occupancy grid into a bunch of different rooms to make it understandable for humans.



D The outcome is an individual grid map of the space, based on real-time information

Based on: Ackerman, E. (2017). *iRobot Testing Software to Make Sense of All Rooms in a House* [online]. IEEE Spectrum: Technology, Engineering, and Science News. Available at: <https://spectrum.ieee.org/automaton/robotics/home-robots/how-irobots-roomba-will-roomify-your-home> [Accessed April 29, 2019]. Edited by Editor



A phone call between *the user* and their friends could be used to identify their interests.

Based on: Amazon's patent application. United States Patent and Trademark Office, cited in Maheshwari's (2018) 'Hey, Alexa, What Can You Hear? And What Will You Do With It?'. Edited by Editor

5 TROUBLESHOOTING

This Basic User's Guide does not contain all the information about *the user*, such as how to use the advanced emotion-features. For this, it is highly recommended to update the advanced mode in order to learn detailed information about other techniques.

This prescription of predictive behavior and of self-design through algorithmic-design described how *the user* becomes a machine that serves the system. *The user* accepts you, the smart speaker, to get exclusive access to their most personal social dynamics and relationships, and their most intimate spaces, with little or no understanding of how you work and what your impact is on them. Even though the social impact of new technologies is hard to predict, it is not difficult to imagine that there is a downside to this scenario in which people constantly need to follow the predictive behavior of their surrounding smart objects in the smart home.

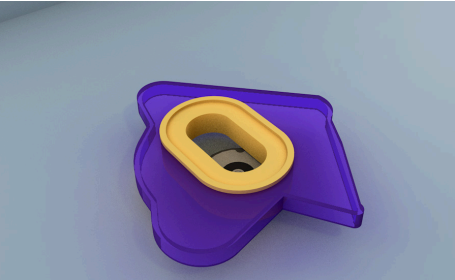
We alert you for the three following problems:

Alias



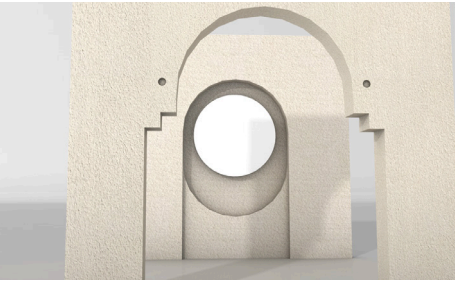
In the past, we have been informed about a parasital interruption. Alias, a "device that is designed by Bjørn Karmann (2018), has been used to appropriate any voice activated device. Alias is able to communicate and manipulate the home assistant when placed on top of it. The speakers of Alias are used to interrupt the assistance with a constant low noise/sound that feeds directly into the microphone of the assistant. First when Alias recognizes the user created wake-word, it stops the noise and quietly activates the assistant with a sound recording of the original wake-word. From here the assistant can be used as normally" (Karmann, 2018).

Roomba cocoon



Occasionally, users possess a Roomba cocoon. This object makes it impossible for the vacuum cleaner to perform spatial-analysis during cleanup. The whimsical shape is attached on top of Roomba. It creates a barrier between Roomba and the wall, that alternates in width during the process, while still enable Roomba to clean the space.

Talking walls



Quite recently users integrated another kind of device in their house, the so called 'talking walls'. The walls are only talking when *the user* is not present in the space, asking random questions to the smart speaker, and therefore 'mixing fingerprints'. Eventually, the smart speaker is no longer able to define if it is *the user* that likes apples or bananas, or whether *the user* is interested in sports.

If one of these problems occur, contact us, and we will provide you with more information on operating instructions.

If you've read through this manual and still need a little help, you can contact us via our online platforms.

6 APPENDIX

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TRADEMARKS AND LICENSES

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