

## Conversation

### Automating Experience:



## Does the 'automated home' diminish or deepen user experience?

**Keywords:** Automation; Experience; Participation; Sustainability

A conversation held at DRS2016

June 29<sup>th</sup> 2016, 2:00 – 3:30 PM.

This document is conversation proposal and documentation in one.

### Catalysts

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### Introduction

In a technologically streamlined world, our dominant version of reality comes with the majority of problems mitigated through the constant and rapid evolution of technology systems. One notable recent progression is that of *automating technologies* within the home, which have been suggested to deliver rich experiences that are both immersive and smart.

The vision for automated living spaces sees people interacting easily within digital environments where by electronics are sensitive to our needs, personalized to requirements,



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anticipatory of behaviour and responsive to our presence all enabled by the extraordinary potential of the *Internet of Things*. There are significant benefits that accompany these forms of development. Yet, for all its affordances, there are larger issues still to be explored concerning agency and potential influence of ambient intelligence and persuasive technologies.

Described as a convergence of information technology and cognitive science, Verbeek (2009) states that these types of innovation 'blur the boundaries' between people and technology, and that within these newly *designed* systems authority lies with designers to anticipate any potential concerns and create inherently responsible systems. Developers argue we have the potential to greatly enhance the services we already employ, and provide an opportunity to 'improve the living experience' (Wilson, Hargreaves & Hauxwell-Baldwin, 2015). In these connected environments, your fridge will know when milk is running low and orders more, domestic heating systems synchronise harmoniously with the weather and your lighting customised in real time to reflect your mood. However, will these systems cut users from the decision-making and experience making process all together? As by destabilizing fluidity and pace of the subject-object interaction, users are empowered to contemplate their actions and ultimately, their motivations (Chapman, 2005).

The majority of existing research is routed in computing, healthcare and environmental engineering exploring this in relation to sustainable energy consumption - smart homes existing within smart grids (Balta-Ozkan et al. 2013; Paetz, Dutschke & Fichtner, 2012), and assisted living - opportunities for prolonged independence and increased wellbeing (Li, Lu & McDonald-Maier, 2015; Chatterjee & Price, 2009). Moreover, these innovations are already being implemented and design researchers are only just beginning to explore and how the automated home fundamentally alters the landscape of our day-to-day experience, and what are the implications of this shift.

This conversation aims to spark debate and discussion by demonstrating two opposing perspectives within this space focusing on uncovering potential opportunities, challenges and threats that exist within automated living environments.

Hosted in partnership with Philips Lighting and the University of Brighton, this 90-minute conversation explores the relationships between the *automated home* and user experience, asking:

### **Does the automated home diminish or deepen user experience?**

It will be a lively debate with two opposing perspectives presented followed by a fully interactive audience discussion focusing on uncovering the potential opportunities and challenges that exist within automated living environments.

In their presentations, catalysts 1 and 2 will adopt deliberately opposing sides of the debate so as to introduce the audience to a wide spectrum of opinion before the conversation gets going.

1. Prof Jonathan Chapman: Facilitator and presenter (automated home will diminish UX)
2. Dr Jon Mason: Facilitator and presenter (automated home will deepen UX)
3. Dr Dzmitry Aliakseyeu: Lead Facilitator
4. Merryn Haines-Gadd: Co-Facilitator

## The session at DRS2016

The following pages present the materials used as well as the results of the session at DRS2016.

## References

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### About the Catalysts:

**Prof Jonathan Chapman** is Director of Design Research Initiatives at the University of Brighton. His research has advanced design and business thinking in settings including Puma, The Body Shop, Philips Lighting, the House of Lords and the UN.

**Dr Jon Mason** is a Senior Scientist at Philips Lighting Research and since 2007 he has worked on concepts for new lighting applications and lighting UI. In 2013 he worked in the team that brought the Philips Hue internet connected lights to the market and continues to explore smart home and *internet of things* applications.

**Dr Dzmitry Aliakseyeu** is a Senior Scientist at Philips Lighting Research. Prior to this he has held position of Assistant Professor at the Industrial Design department of the Eindhoven University of Technology. At Philips he has worked on new lighting applications and interfaces, including Philips Hue - internet connected lighting system for home. His research interests are in novel interaction technologies and user interaction in the area of connected lighting.

**Merryn Haines-Gadd** is a designer and PhD candidate at University of Brighton exploring the integration of Emotionally Durable Design, Service Innovation and Circular Economy thinking into consumer lighting, building upon her previous experience in design, innovation processes and sustainability.

# Automating Experience: Does the 'Automated Home' Diminish or Deepen User Experience?

## What...?

Hosted in partnership with Philips Lighting and the University of Brighton, this conversation explores the relationships between the automated home and user experience, through 5 themes: **Connection, Big Brother, Assisted Living, Usership and Brand.**

## Where... ?

Design Research Society Conference  
Brighton Dome, June 2016.

## Who...?

Designers, engineers and scientists from both academia and industry from a variety of institutions such as: Carnegie Mellon, Chalmers, Cincinnati, Edinburgh, Dundee, Delft, Loughborough, Sheffield, Twente, Warwick, Visual Logic group and Opower.

## How...?

A debate! ... of mixed teams of industry and academia debating:

'Does the automated home diminish or deepen user experience?'

'For'



'Against'

The proposition... with audience participation throughout, their contributions shown below...

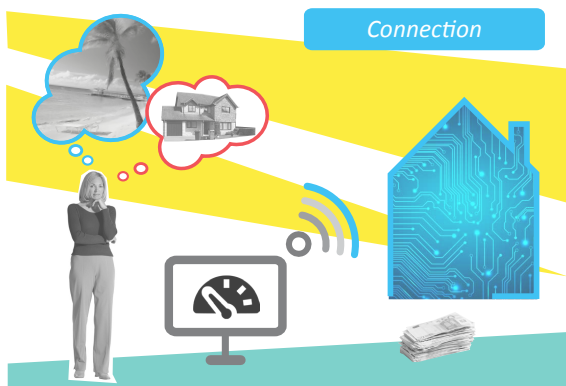
- Like a dashboard, you have more transparency on energy and use, no hidden surprises!
- Can inform you of potential problems
- Can be reactive to your needs
- Manages things while you are away



What the debaters said...

- As systems get more complicated we will become less connected as we won't be able to make small fixes anymore!
- Could create house that is cold sterile and devoid of idiosyncrasies and personality

'For'

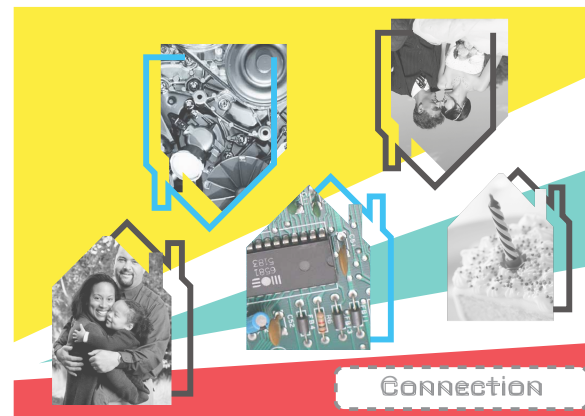


- 'It changes the whole relationship, the house it is more sensitive to you. If you are ill, it heats your bed, adding positive things to your life...'
- However, utility is important for connection, must work and be reliable!



What the audience said...

- 'My wife programs our house and I don't know how to un-program it'
- When things go wrong...who is to blame? Who is responsible?...the user, the producer or the house?



'Against'

- Will act as a safety filter checking incoming and outgoing data
- Your home will work with others in the area to ensure safety and monitor weather warnings of possible issues affecting the neighbourhood



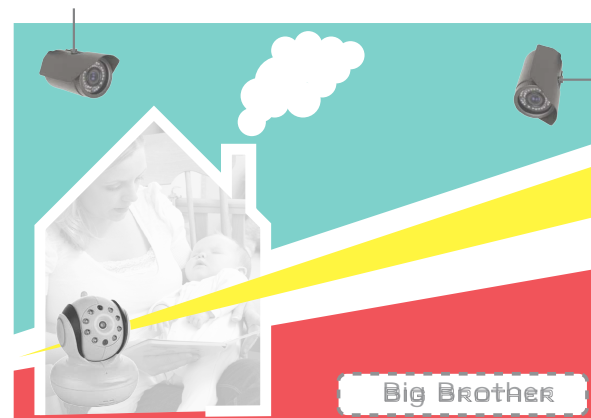
What the debaters said...

- Simple machines and analogue cannot be hacked
- There is no way of knowing who is on the other side of your system
- Chance that children or vulnerable people could be taken advantage of in their own home

'For'



'Against'



- 'Be your butler - As long as it can be controlled, it can be an extension of yourself'
- Could I donate my Data? Could it be a good thing?
- How do we change perceptions of security in this space?



What the audience said...

- 'My Data, where is it...? Who has access to it?'
- How do I choose which Big Brother to look after me?
- Might I be taken advantage of and up sold on services

- Guide, help elderly residents to live independently for longer
- Provide data to healthcare providers and family
- Peace of mind that there are back ups in place



What the debaters said...

- Excuse to keep us out of the hospital and reduce the expense of the elderly
- Real solutions will be socially driven and not about sensors and data
- Elderly and loved ones could feel imprisoned, monitored, remove all autonomy

'For'



'Against'

- Smart homes help us take care of our family members - 'share the load'
- 'Could this prolong positive relationship with family members by reduces negative interactions?'



What the audience said...

- Could automation increase risk of sedentary lifestyles?
- Where is the access to information and technology? It needs to connect with health care systems
- The technology has to adapt and evolve with changing needs



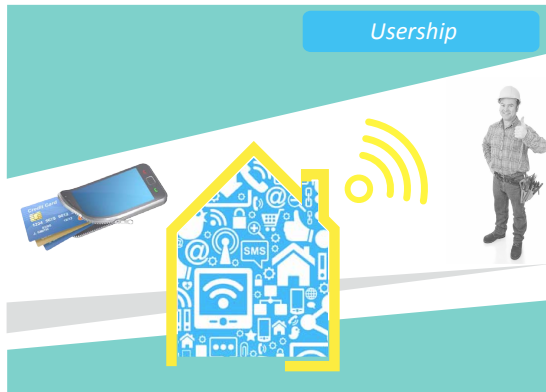
- *We are happy to use apps and software to manage banking why not the home?*
- *Reduced paranoia and increased confidence*
- *Some systems are safer if automated, lower risk of potential human error*



*What the debaters said...*

- *The home ought to get simpler not more technical*
- *Over reliance on technology can be the weaker link should anything fail in the system*
- *We are engaging in entirely curated experiences crafted by other people*

**'For'**



**'Against'**

- *Interfaces are simpler*
- *'I went with Hive - because the interface on our boiler is so appalling and hard to fathom. This one I understand'*



*What the audience said...*

- *How adaptable is it?*
- *'Think Smart living not the smart home - Will I become more wasteful?'*
- *Need to promote learning of these complex systems*
- *Risk of over scripted living*

- *Makes the mundane more interesting and with brands we can personalize our homes*
- *Streamlines the process of engaging with providers*
- *Creates the opportunity your devices to work in harmony with each other*



*What the debaters said...*

- *Locked in to a monopoly system?*
- *Reduce the choice we have when selecting new products for our home*
- *Brands with active presence in my home? Are we just inviting more people to come and live with us...*

**'For'**

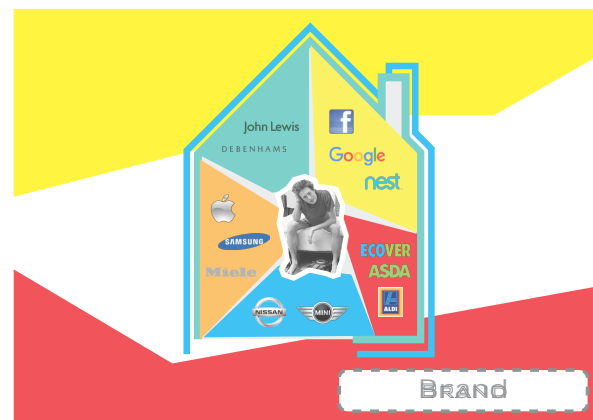


- *Self-identification, I am apple user...'*
- *'Who are the different potential of owner /user of the smart home, municipalities? housing companies?'*
- *'Brand doesn't need to be commercial - what about the brand of a city!'*



*What the audience said...*

- *Will I be Locked into a system... and ultimately a brand?*
- *'Nest not open source - stuck with upgrades'*
- *'Ultimately brands don't want to be invisible'*



**'Against'**

## Summary:

### **Systems & Technology**

- **Trust**

*How can we build and instil a sense trust in organisations, technologies and systems?*

- **Data**

*What are the potential risks and positive opportunities for data?*

- **Controllability**

*Are we gaining more or less controllability over our home environment?*

- **Access**

*Who has access to my home? Are these services available to everyone?*

- **Responsibility**

*Will this allow people to share out or dodge responsibility?*

### **People & Experience**

- **Relationships**

*How will this change the relationships we have with our homes, family and community?*

- **Engagement**

*Will we be more or less engaged with our home environments?*

- **Interactions**

*How will these change? Will we have ability to choose and curate our how we interact with the home?*

- **Needs**

*Meeting unmet needs? or making us more dependant and sedentary in the future?*

- **Behaviour**

*How much influence will these systems have on our behaviour and will it be positive or negative thing?*