

# Alexa, Is the Smart Home vision failing?

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# me: lapsed research scientist

## ACM CHI 2000



### The Secret Life of Notebooks

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HPL-2000-21  
7<sup>th</sup> February, 2000\*

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Laptops,  
mobile  
computing,  
networking,  
context  
awareness

We describe the secret life of notebooks in professionals who use them as desktop replacements. Usage logs reveal that there are four key contexts with their own separate requirements: desk, mobile, networking, and travel. Dynamic detection of and adaptation to these contexts could enhance the value and usability of notebooks and their applications.

## UBICOMP 2001



### Towards an Adaptive and Context Aware Laptop

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laptop  
computing,  
power  
management,  
context  
awareness,  
ubiquitous  
computing

This paper describes a prototype application for notebook computers which infers its current context and adapts some aspects of the system -including the power policy and web proxy settings- to that context. In this manner the computer adapts to the different use situations it encounters. The prototype is limited in that it does not learn to predict user contexts, and, in the absence of good network identification technologies, context detection is fragile. We propose some improvements in the detection of context and mechanisms to support dynamic system adaptation.

# Microsoft's 1999 vision video

# Mother returns from work



# Checks family calendars



# Texts daughter's PDA



# Hands-free call to partner



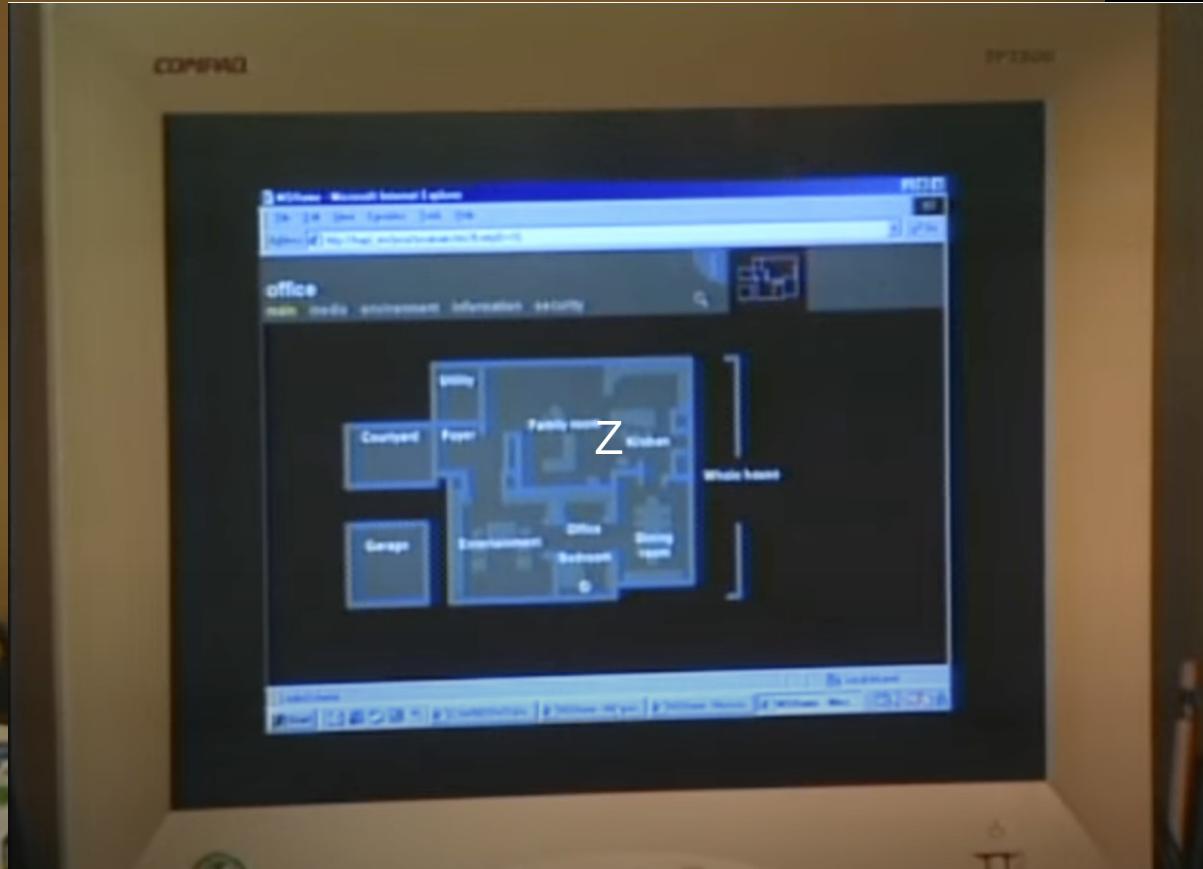
# Family meal with wine and TV



# Post-meal cluster admin



# Visio/Active Directory



# The dream

- Cliché US suburban family & lifestyle
- A house you can talk to
- System admin is fun
- Happiness all round

[https://youtu.be/9V\\_0xDUg0h0](https://youtu.be/9V_0xDUg0h0)

# Yes, but does it work? Amazon's \$10B question

*'echo how profitable is amazon echo'*

*'Do you want to know the price for amazon  
echo?'*

*'echo play my favorites'*

*'Your Liked Songs from Spotify.'*

```
SELECT COUNT(1) FROM PLAYLISTS  
WHERE NAME='liked' AND USER='steve'
```

*'shuffle my favorites'*

```
SELECT COUNT(1) FROM PLAYLISTS  
WHERE LIKE '%favorites%'
```

# Home Automation: Zigbee



- ✓ Ad-hoc multihop low-power network
- ✓ Device discovery
- ✓ Lights, switches, more
- ✓ Plug-and-play products from device vendors (Philips, IKEA)
- ✓ Retro-fit to existing lights

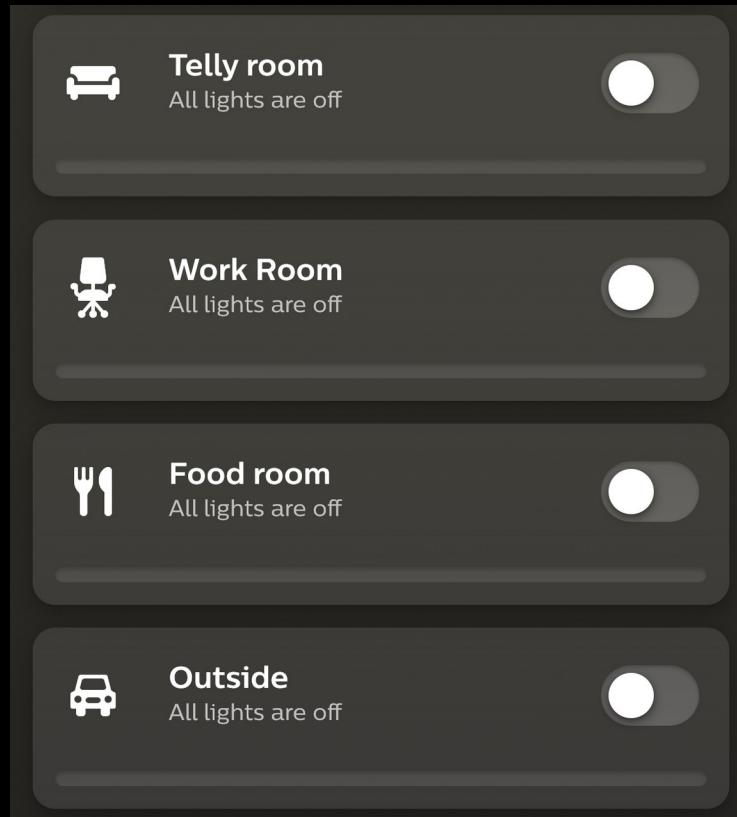
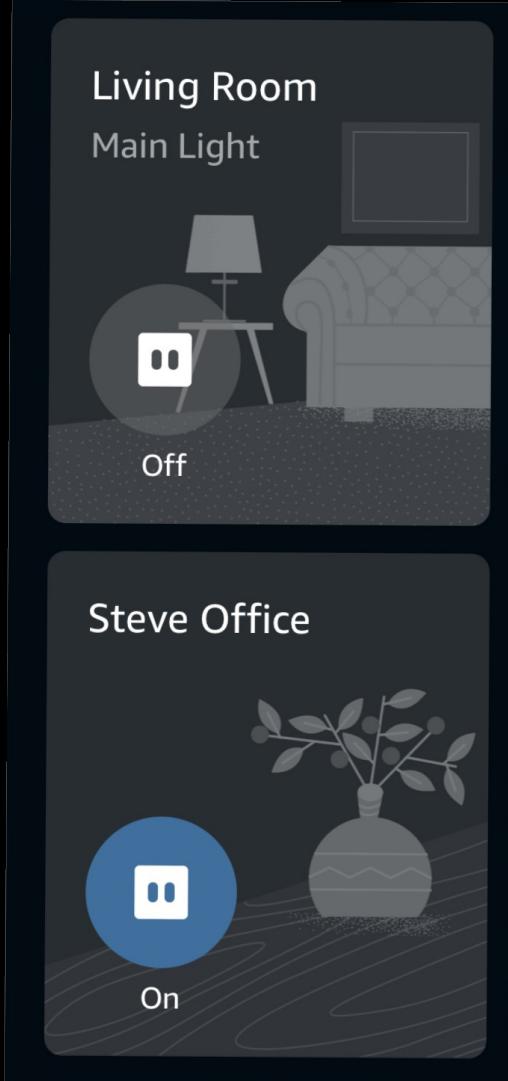
# System Admin Fun

	A	B	C	D	E
1	Name	ID	alexa name	mount	Notes
2	C0	B90309	office ceiling	screw	office
3	C1		vase	screw	kitchen
4	C2	711258	colour two	screw	bike room
5	M1	2C0873	mono one	screw	kitchen
6	M2	B85336	plant lamp	bayonet	kitchen

- ✗ Critical mass of devices needed
- ✗ Disassociation
- ✗ Debugging
- ✗ Vendor interoperability

*2024: Thread + Matter may help*

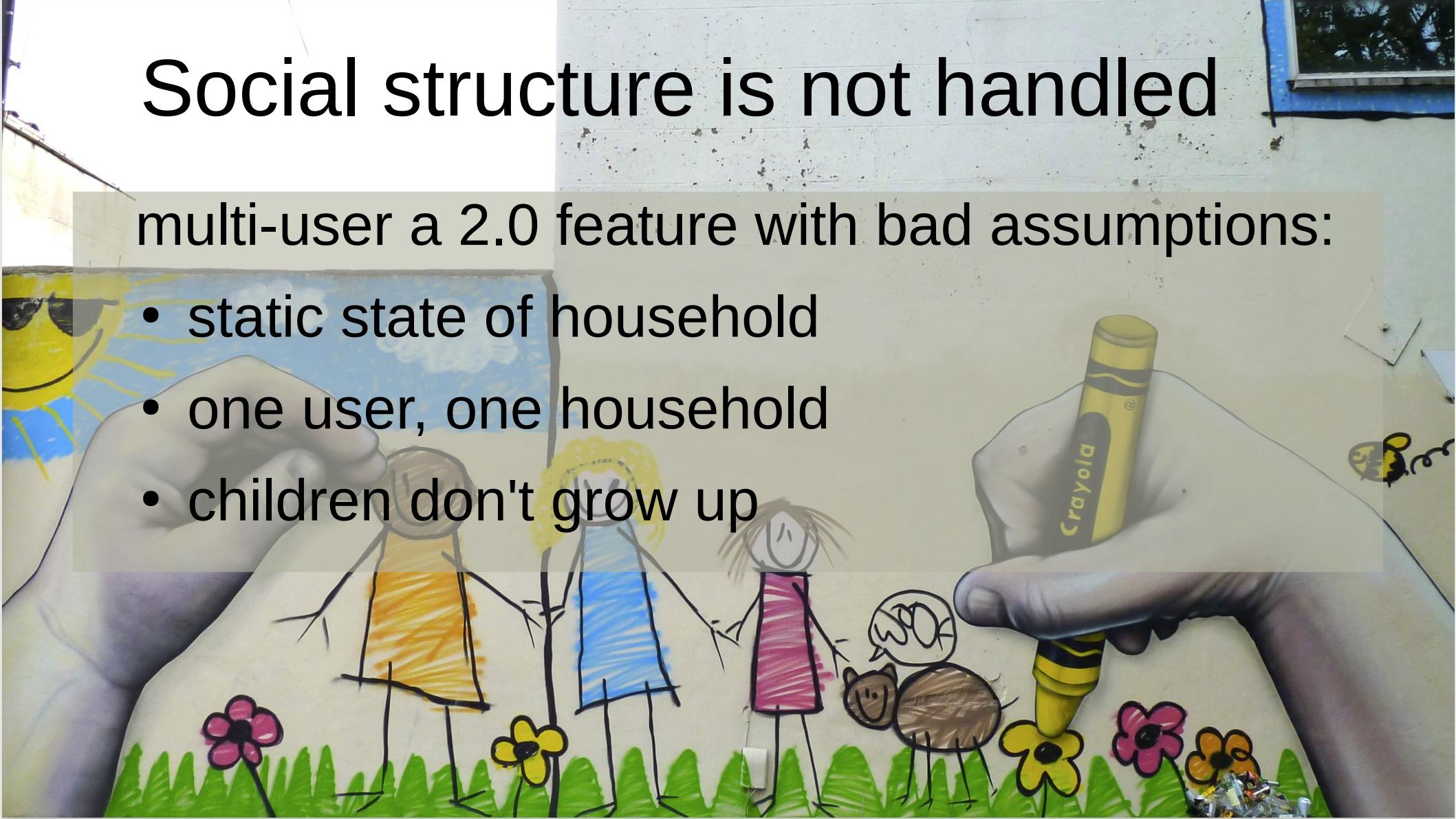
# debugging "office"



# Social structure is not handled

multi-user a 2.0 feature with bad assumptions:

- static state of household
- one user, one household
- children don't grow up





YOUR PROFILE

Steve Lochrin

Your Family   Bina   Bina   Bina   Alexander (Child)   + Add Someone Else

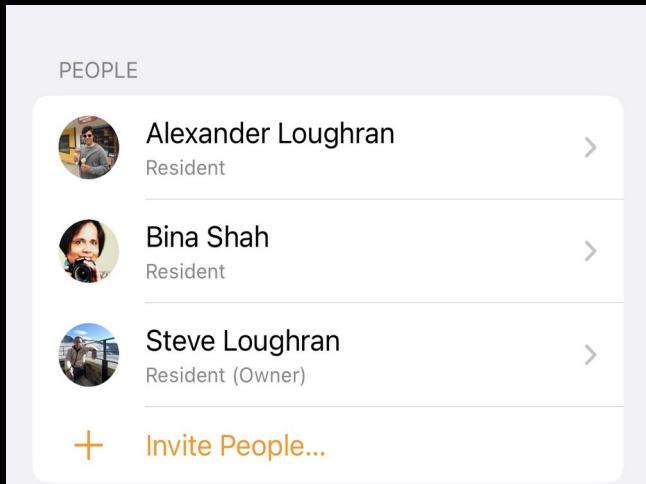
Family

Alexander Adult

Steve (Me) Parent/Guardian

Bina Organiser

# Surely Apple gets it right? No



## Can a child be part of two family sharing accounts? Divorced.

Parents of 2 family households have two different adult accounts that could allow family sharing. How do we each have the ability to purchase apps for our children who move between houses? Right now the child is only connected to one parent's account on her new iPad which will travel between houses.

*iPhone 6s, iOS 10.3*

Posted on Apr 23, 2017 9:31 AM

Reply

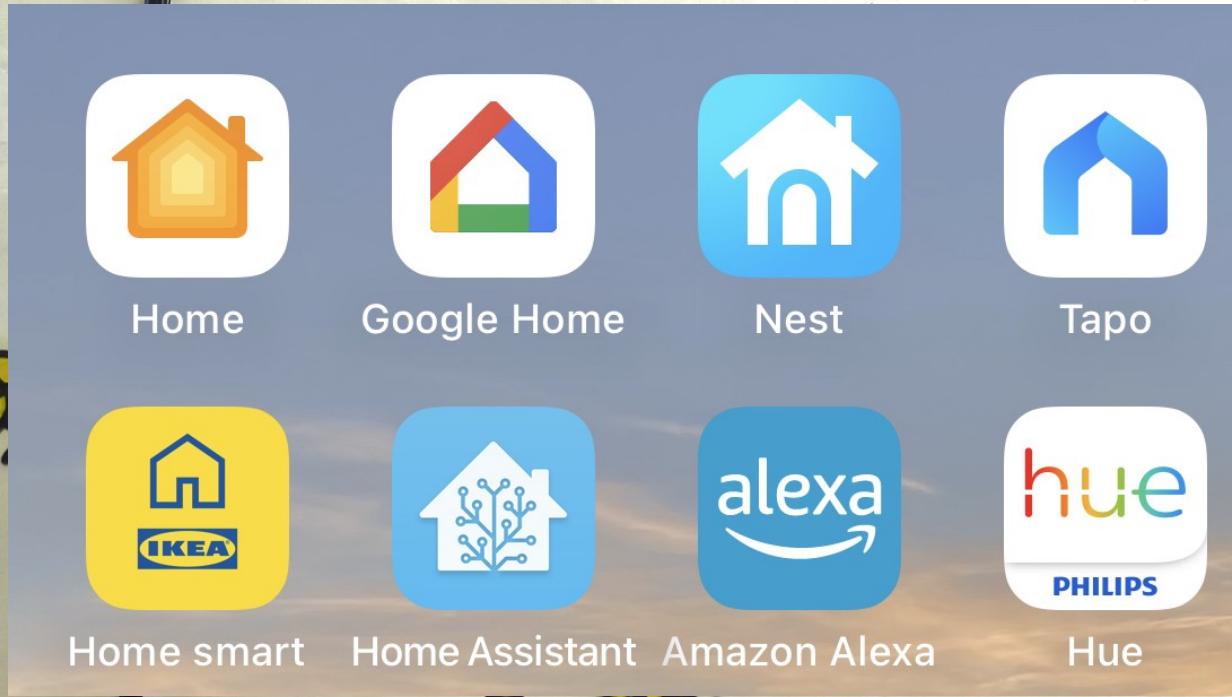
Me too (356)

**Could not add room  
“Default Room”**

An item with a similar name already exists. Try entering a different name.

OK

# ecosystem conflict



by dunes  
age 25½

# Predator



Home



Google Home



Amazon Alexa

# Prey



Home smart



Nest



Tapo



eve.



Hue



SONOS  
S1



Blink

# Prey gets eaten

In 2019, we made the decision to eventually [retire Works with Nest](#) to unify our efforts around third-party connected home devices under a single platform for developers to build features for a more helpful home – with a focus on compatibility, security and privacy. The goal is to simplify the developer experience and give you more control over how your data is shared.

We're reaching out to let you know that after extending support for Works with Nest for the last few years, it will wind down and no longer work as of **29 September 2023**.

# Assertions

- The phone represents people
- Everything else is a peripheral
- But: app-only is brittle & inflexible

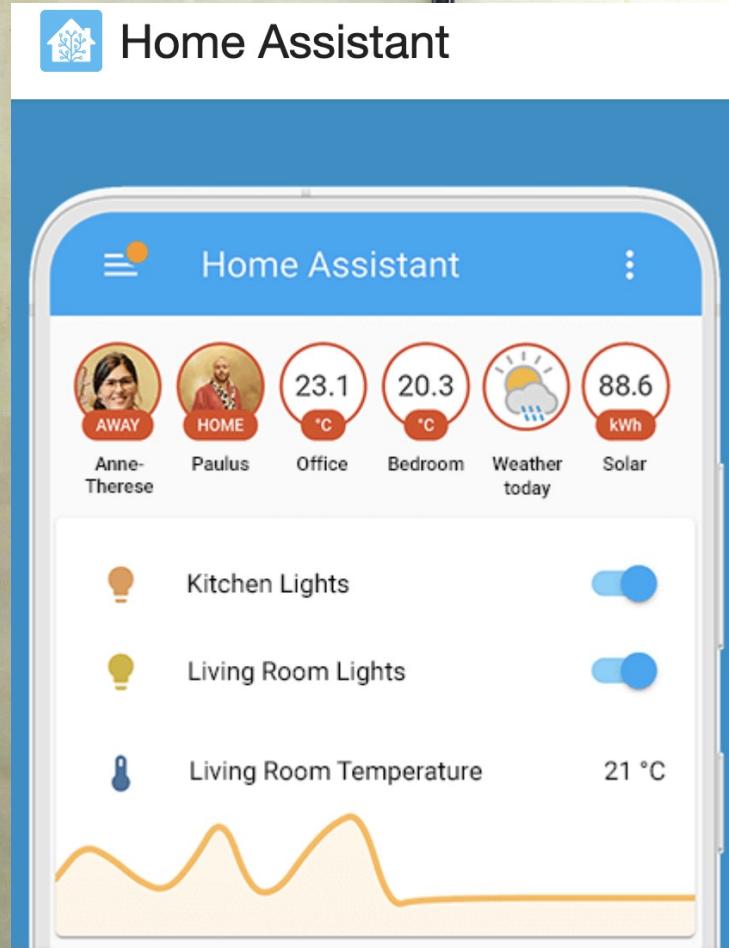
*Everything needs a Web UI and a Web API*



What to do?

# Fully self sufficient





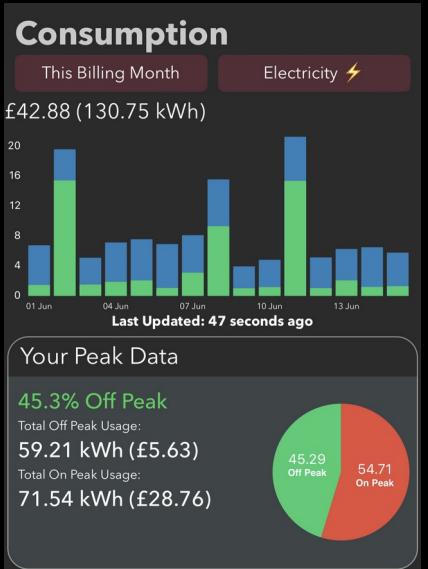
The image shows the official openHAB website. The top half features the openHAB logo and the tagline "empowering the smart home". Below the tagline is a sub-tagline: "a vendor and technology agnostic open source automation software for your home". The bottom half of the image is covered by a large, colorful drawing of a window with a blue frame, surrounded by flowers and bees, and the text "by danoes age 25½".

# Give up and be happy?









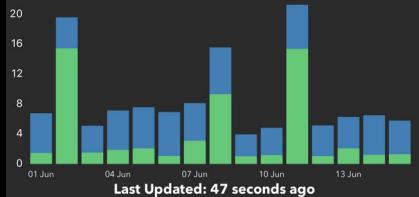


## Consumption

This Billing Month

Electricity ⚡

£42.88 (130.75 kWh)



## Your Peak Data

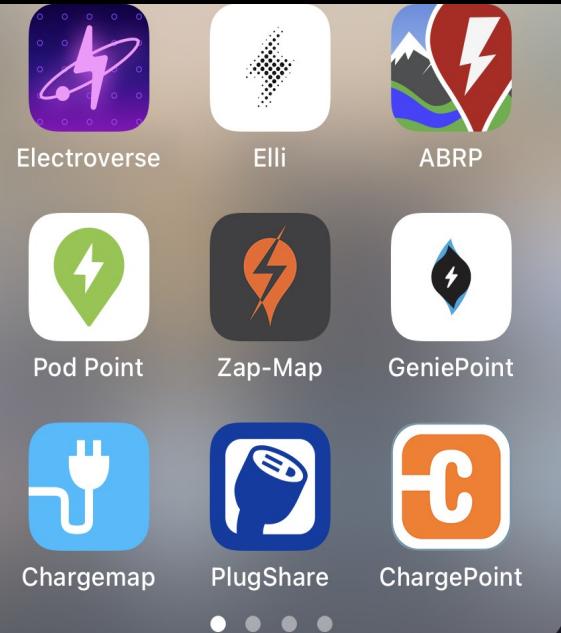
45.3% Off Peak

Total Off Peak Usage:

59.21 kWh (£5.63)

Total On Peak Usage:

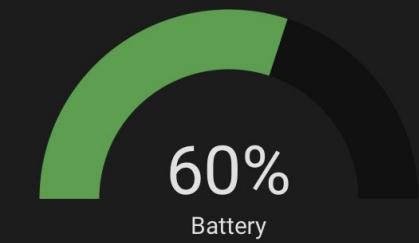
71.54 kWh (£28.76)



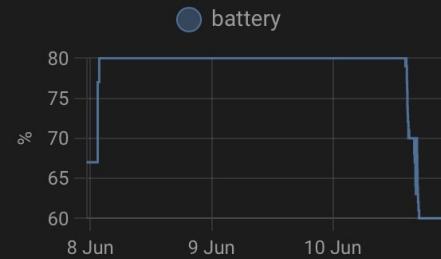
# Same world, just outdoors

- Weak social structure *again*
- App-first/only world *again*
- Manufacturers vs. phones *again*

HOME

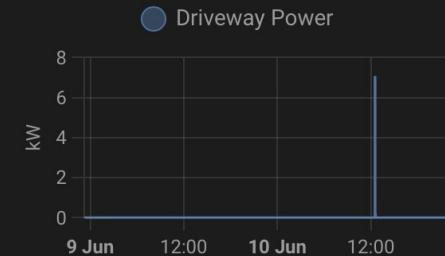


### Battery History



	Charging?	Disconnected
	Charge Remaining Time	Unknown
	Charger Power	Unknown
	Plugged In?	True
	Range	158 mi
	battery	60%

### Charging History



### Easee Charger

	Power	0.0 kW
	Status	Awaiting start

# Home Assistant +Tronity @ €5/mo



A Better Routeplanner

**4 h 1 min (147 mi)**  
3 h 43 min ⚡ 8 min - One charge

My position

13:26

+1



**2 h 9 min (87 mi)**

Tuffins Supermarket and Garden Centre [Fuuse]

15:36 → 15:54 (⚡ 8 min)

44% → 63%

**1 h 34 min (60 mi)**

Dolgellau, Wales, United Kingdom

17:28

43%

Add waypoint

Amenity



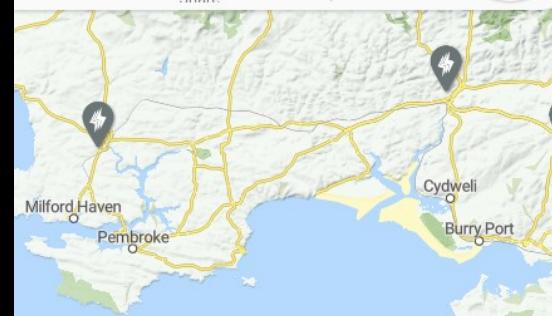
Restart



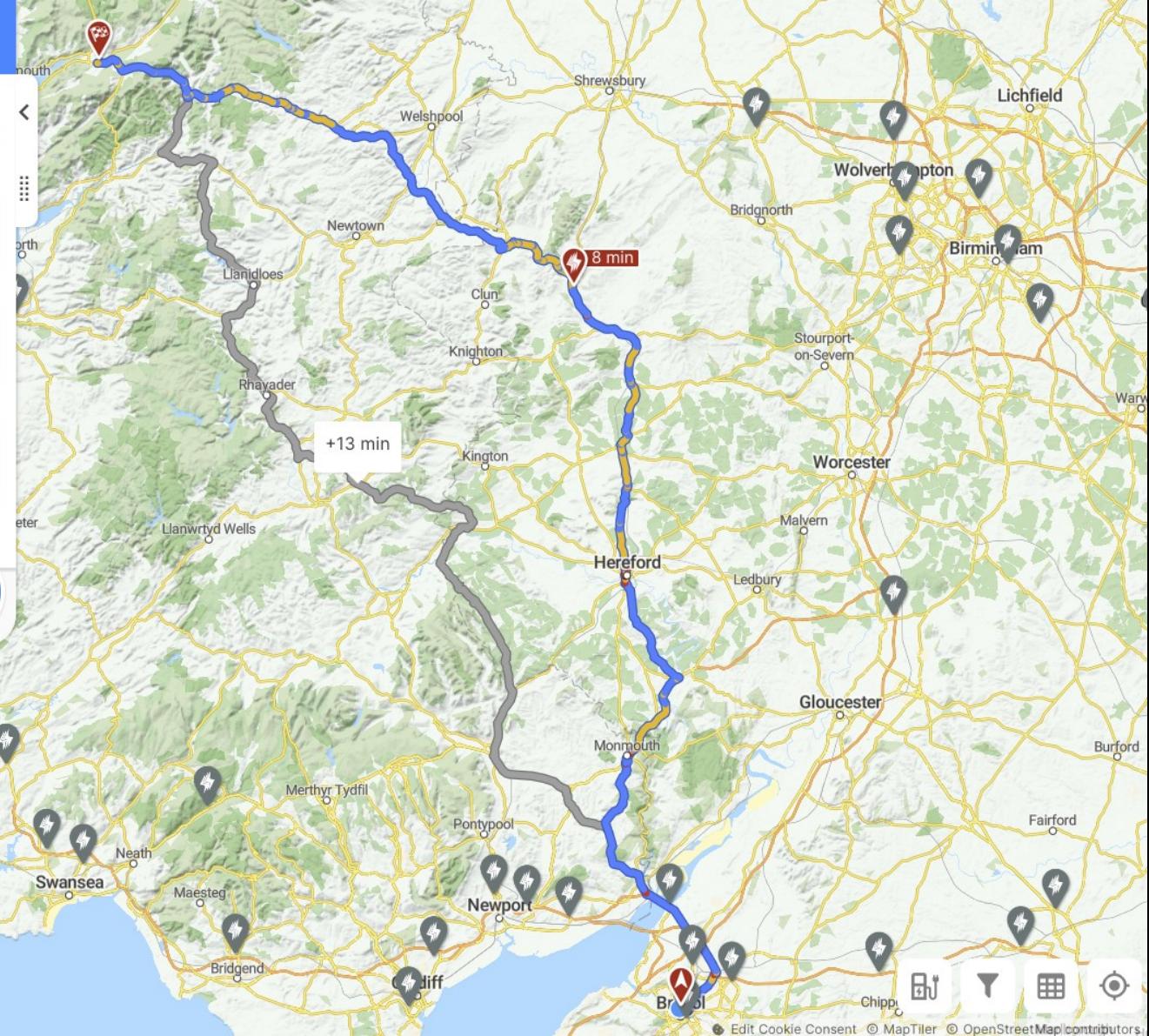
Share



Save plan



**€5/mo**



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# How we survive this world?

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- Subscribe to the startups!
- Demand APIs everywhere!
- Contribute to plugins!
- Code for people!



by dOnes  
age 25½

