

## Writing - Tech Blog

### IoT Failures

A home thermostat that learns your habits. Connected cameras that let you monitor your home from your smartphone. Automated pet feeders that keep Rover and Kitty happy while you work those extra hours.

The Internet of Things (IoT) promises to enrich our world in so many ways. But the technology is still in its early days, struggling to stand up on its own and figuring out how to walk.

Sometimes we learn best from our mistakes. With that in mind, let's look at 10 times where an IoT device stumbled or fell.

#### 1. Remote Creepers

TRENDnet IP cameras didn't authenticate users. Hackers could google for a particular URL structure linking to the camera and connect to it directly from the web.

<http://www.scmagazine.com/ftc-cracks-down-on-seller-that-left-in-home-security-cameras-exposed-to-hack/article/310449/>

#### 2. Keys Included

Belkin WeMo included digital keys in the firmware which exposed a way for hackers to take control of connected lights and appliances.

<http://arstechnica.com/security/2014/02/password-leak-in-wemo-devices-makes-home-appliances-susceptible-to-hijacks/>

#### 3. Illuminati

LIFX exposed wifi network passwords, allowing hackers to sniff traffic when a new bulb was connected and gain access to the entire network.

<http://arstechnica.com/security/2014/07/crypto-weakness-in-smart-led-lightbulbs-exposes-wi-fi-passwords/>

#### 4. Eyes Wide Shut

Wink sold a hub that connects IoT devices. The unit came with security installed, but the security certificate expired and the devices bricked as a result.

<https://www.wired.com/2015/04/smart-home-headaches/>

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### 5. Doggone Hungry

PetNet manufactures automated "smart" pet feeders. A system failure at a third-party server provider caused a loss of scheduled feedings and remote feedings.  
<http://readwrite.com/2016/08/01/petnet-shows-happens-iot-fails-dl1/>

### 6. Let There Be Light

Insteon manufactures a line of home automation systems. One of their products had two issues; it didn't require a username and password and its interface was visible to search engines. A reporter was able to do a simple Google search and find homes where she could control the lighting and learn private information (like names of children).

<http://www.forbes.com/sites/kashmirhill/2013/07/26/smart-homes-hack/#ac94c0946a5f>

### 7. Not Burning, Just Waving

Nest manufactures a popular connected home thermostat. They also ventured into the smoke alarm business, but recalled 400K units after its "reset by waving at it" feature was found to be too similar to how you might react during an actual fire. The result was that it might not sound an alarm when it needed to.

<http://gizmodo.com/nest-is-recalling-its-protect-smoke-alarm-1579734411>

### 8. No Clouds in Sight

Nest also shut down Revolv - a smart home hub. The hub relied upon a cloud service to communicate with your smartphone. Nest shut down the cloud service. Anyone who bought the product and connected any part of their home to it will lost the ability to control those devices.

<https://www.wired.com/2016/04/nests-hub-shutdown-proves-youre-crazy-buy-internet-things/>

### 9. Baby It's Cold Outside

Nest had a software bug that drained the internal battery. The bug came to light in January - which meant affected users woke up to cold houses. The fix involved a nine-step process starting with removal of the unit from the wall, charging it via USB and then reinstalling.

<http://www.nytimes.com/2016/01/14/fashion/nest-thermostat-glitch-battery-dies-software-freeze.html>

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### 10. Tough to Beat

Fitbit - a popular fitness activity tracker - was recently hit with a class action lawsuit claiming that the units don't accurately measure heart rates, especially during exercise.

<http://ww2.kqed.org/futureofyou/2016/01/08/fitbit-hit-with-class-action-lawsuit-over-alleged-misreading-of-heart-rates/>

### Not Quite There

I wish I could end this list with the message that all of these issue are now behind us. Unfortunately we're not quite there yet. The IoT market continues to evolve and grow. Growth always involves pain.