

IT Security Goes Organic

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Why is IT Security Such an Issue?

Problem 1: Growing Threats

- **43% of businesses** experienced a data loss through cybersecurity incidents in 2016.
- **38% of targeted attacks** in 2016 were caused by malicious actions of employees.
- Ransomware continues to be lucrative for **cyber extortionists**.
- The Internet of Things (IoT) presents an enticing target, and the industry **has no standards for authentication**.
- Voice-first platforms such as Amazon Echo and Google Home open new attack vectors and data privacy concerns
- **Cyberpropaganda** used to influence public opinion and elections
- The average cost of a security incident is **\$4 million**.

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Problem 2: Not Enough IT Security Personnel

- Cybersecurity job market estimated by Forbes to grow from \$75B in 2015 to \$170B by 2020.
- Forbes estimates **more than 209,000 unfilled cybersecurity jobs** in the U.S.
- Postings are up 74% in the last five years.
- Demand anticipated to rise to **6M openings globally by 2019**, with a **shortfall of 1.5M**.
- Cisco estimates **one million cybersecurity job openings in 2016**.
- Companies and the government aggressively working to fill open positions.

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Problem 3: Limitations to Current Technology

- Transmission of passwords through WiFi or Bluetooth **encourages eavesdropping**.
- Static approaches such as databases of signatures and known bad elements inadequate for **new malware created daily**.
- Most IT security products have **scalability issues, difficult to deploy and manage**.
- Most IT security approaches are **a hodgepodge of point solutions** from disparate vendors.
 - IT environments **challenging** (and **expensive**) to manage.

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Problem 4: Outdated Security Approaches

- **Forensic** versus **preemptive** approaches.
- Intrusion-centric approaches leave **security gaps for on premise threats**.
- Demonstrating compliance is **not the same as being secure**.

What New Horrors Are Coming?

Cybercriminals Expand Their Scope

- The **weaponizing** of IoT.
- Ransomware designed to **quickly spread** ransomware.
- The cloud used to **build malware** and **launch attacks**.

Upcoming IT Security Innovations

Passwords Sent Through Your Body

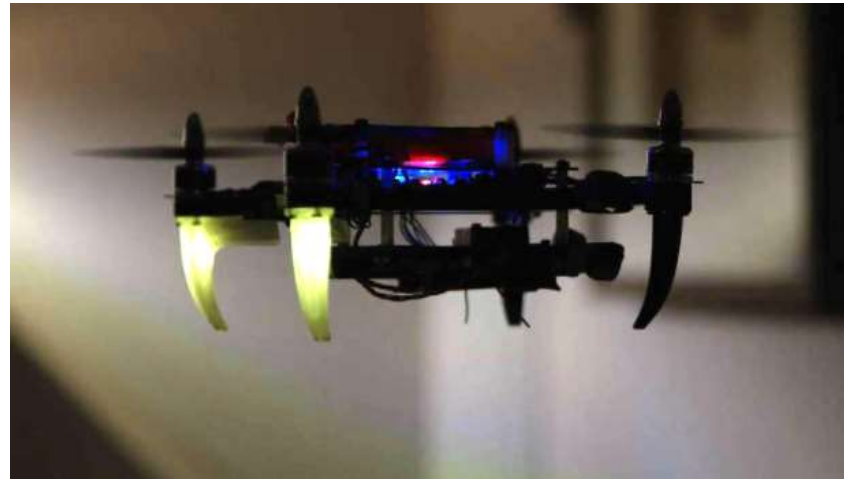
- **Fingerprint sensors can send authentication codes** to door locks or wearable medical devices.
- Low-frequency authentication transmissions travel well through the human body **without propagating over the air**.
- On-body transmissions a **more secure way** to transmit authenticating information between devices.



Upcoming IT Security Innovations

Drone Security

- Alarm.com partnered with Qualcomm to develop a security system that employs a **camera-equipped drone**.
- Drones can be deployed to areas needing to be secured to check out **unexpected activity**.
- Working on making the devices **autonomous** – automatically fly to any area when motion sensors are tripped or unexpected noise.
- Footage provided to **mobile devices**.



Upcoming IT Security Innovations

Floodlight Cameras

- [Ring](#) has developed motion-sensitive devices that **combine security cameras with LED floodlights**.
- Connected to home WiFi, enabling **notifications to be pushed to mobile devices**.
- App enables the user to see **live footage** of movement.
- Scare intruders away through **two-way communication** or an **alarm siren**.

Questions?

If you need more information:

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