

Payments and the Internet of Things

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Billions of devices

Example: Starter Interrupt Devices



The thermometer showed a 103.5-degree fever, and her 10-year-old's asthma was flaring up. Mary Bolender, who lives in Las Vegas, needed to get her daughter to an emergency room, but her 2005 Chrysler van would not start.

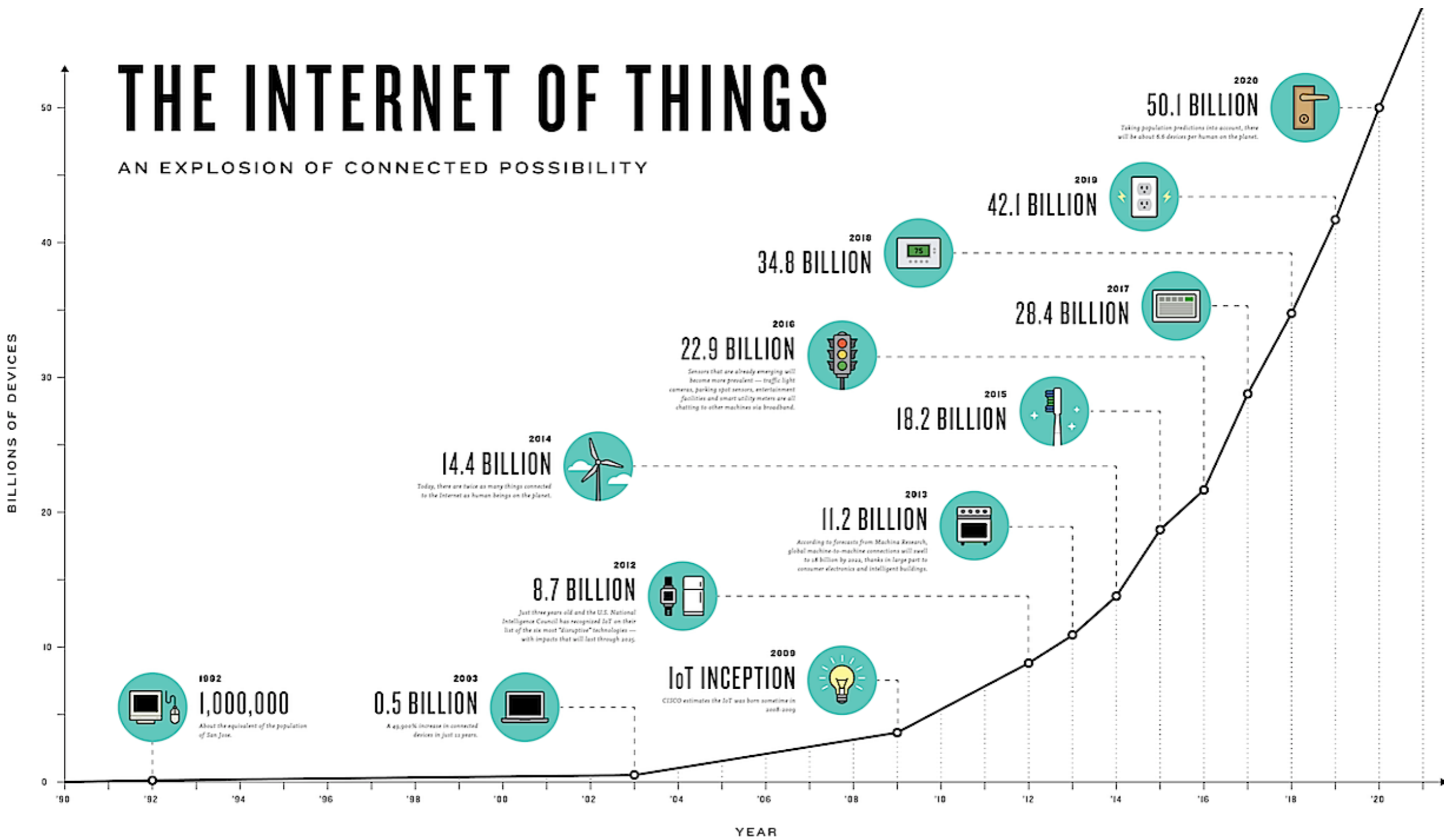
The cause was not a mechanical problem — it was her lender.

Ms. Bolender was three days behind on her monthly car payment. Her lender, C.A.G. Acceptance of Mesa, Ariz., remotely activated a device in her car's dashboard that prevented her car from starting. Before she could get back on the road, she had to pay more than \$389, money she did not have that morning in March.

—“Miss a Payment? Good Luck Moving that Car” — **The New York Times**, Sep. 24, 2014
http://dealbook.nytimes.com/2014/09/24/miss-a-payment-good-luck-moving-that-car/?_php=true&_type=blogs&_r=0

THE INTERNET OF THINGS

AN EXPLOSION OF CONNECTED POSSIBILITY



Cisco: 50 billion network-connected devices by 2020 (5x)

Non-payments legal issues in the Internet of Things

- Privacy
- Data collection
- Bandwidth
- Interoperability
- Product liability

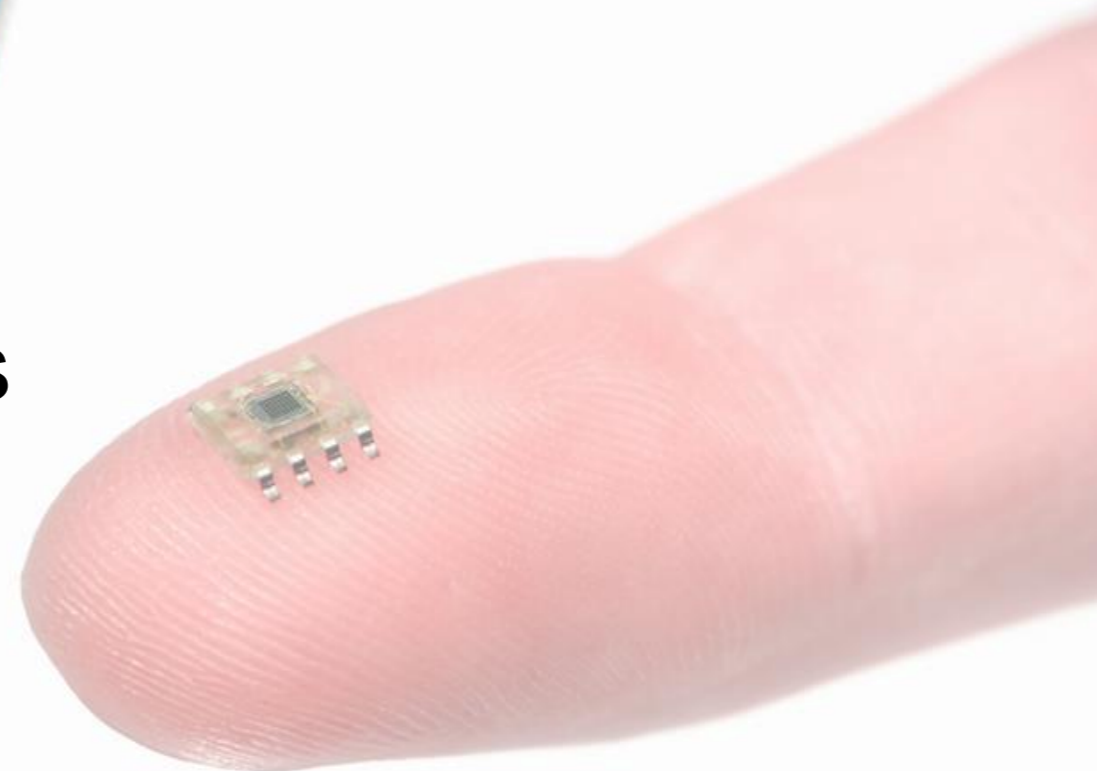


Will the click-wrap disclaimers of warranty and limitations of liability survive?

- Any network-connected device can be an access device to payment account *and* a point of sale device



- Explosion in cashless transactions
- Access to data about those transactions
- Micropayments
- Usage-based payments



Usage-based (micro)payments and the sharing economy

- Metering personal property



- Additive manufacturing and mass customization

Payments law and the IoT

- Wisconsin DFI—1/18/12:
Disabling a vehicle with a starter interrupt device is an unfair collection practice and improper repossession
- Other issues?
 - Consumer protection
 - AML
 - Safety & soundness



State of Wisconsin
Department of Financial Institutions

Scott Walker, Governor

Peter Bildsten, Secretary

Starter Interrupter Devices

January 18, 2012

A starter interrupter device is a mechanism that is installed on a motor vehicle that when activated by remote control will prevent the vehicle from starting. Occasionally, this Department is asked if such devices can be used as a collection tool. The use of such devices is prohibited.

Disabling a vehicle could create a situation where the consumer is responsible for a vehicle even though the consumer no longer has control over the vehicle. Preventing the consumer from moving the vehicle can cause problems such as the accrual of parking tickets, the towing of the vehicle by governmental entities or private land owners, and preventing the use of a driveway/garage. Requiring a consumer to maintain property insurance on a vehicle, while at the same time depriving the consumer of the use of that vehicle, would also be unreasonable. For these reasons, disabling a vehicle would be an unfair collection practice and a violation of sections 218.0116(1)(f) and/or 427.104(1)(h) of the Wisconsin Statutes.

The act of disabling a vehicle has the same result as taking possession of the vehicle. In both cases the owner is deprived of the use of the vehicle. As a result, the Department considers disabling a vehicle to be the equivalent of a repossession. Disabling a vehicle prior to the time the creditor has the right to physically take possession of the vehicle would be an improper repossession and therefore also a violation of section 425.206 of the Wisconsin Statutes.

A handwritten signature in blue ink, appearing to read 'Paul Egide'.

Paul Egide
Director

Regulation E

§1005(a)(1)—“**Access device** means a card, code, or other means of access to a consumer's account, or any combination thereof, that may be used by the consumer to initiate electronic fund transfers.”

§1005(b)(1)—“**Account** means a demand deposit (checking), savings, or other consumer asset account (other than an occasional or incidental credit balance in a credit plan) held directly or indirectly by a financial institution and established primarily for personal, family, or household purposes

§1005.3: “The term **electronic fund transfer** means any transfer of funds that is initiated through an electronic terminal, telephone, computer, or magnetic tape for the purpose of ordering, instructing, or authorizing a financial institution to debit or credit a consumer's account.”





Consumer Financial
Protection Bureau

CFPB Proposed Rule—Prepaid Accounts Under Regulation E

New §1005(b)(3)—“A ***prepaid account*** is a card, code or other device, not otherwise an account under paragraph (b)(1) of this section, which is established primarily for personal, family or household purposes, and which:

(A) is either issued on a prepaid basis to a consumer in a specified amount or not issued on a prepaid basis but capable of being loaded with funds thereafter;

(B) is redeemable upon presentation at multiple, unaffiliated merchants for goods or services, usable at automated teller machines, or usable for person-to-person transfers...”

- Applies to digital wallets and mobile wallets, unless mere pass-through for other accounts.
- Implications of sweeping credit restrictions for innovative IoT trade credit etc.

—79 FR 77102 (Dec. 23, 2014)

Anti-Money Laundering

- **Data security** risks of IoT—KYC, device access, data access
- **The Internet of Unbanked Things?** Anticipate proliferation of new categories of prepaid payment devices—chits, chips, and wallets
- Diffusion of responsibility and control
- Applicability of FinCEN **prepaid access** rules?

The Internet of Things on the Blockchain

- **Bitcoin 2.0**
- **Programmable money + smart contracts + smart property = Utopia or Skynet?**
- **Secured transactions, notary systems, micropayment, usage-based transactions, sharing economy**
- **Decentralized exchanges for trading blockchain-keyed devices**
- **Imagine a world of networked objects (physical and digital) governed by unbreakable code-based contracts**