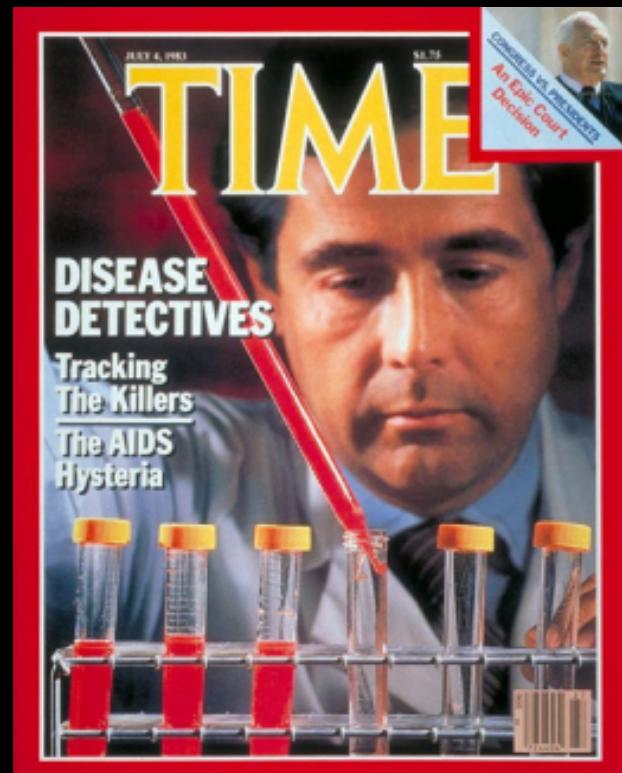


# War, Accidents, or Disease?

Keynote  
Chris Wysopal

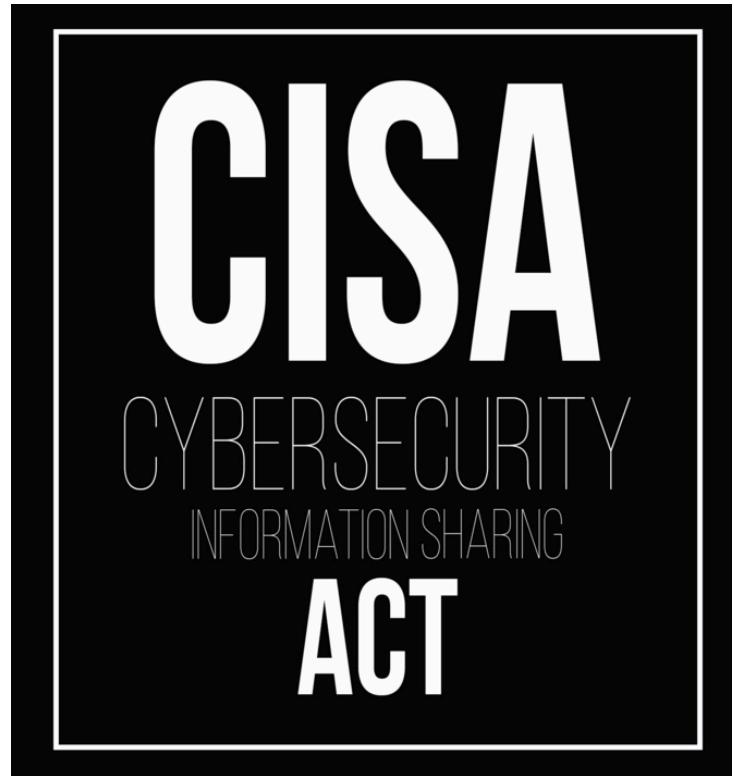


January 16, 2016

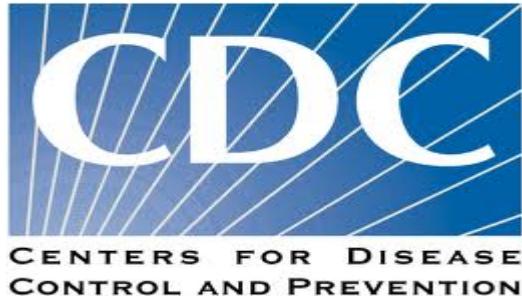


# The current government paradigm

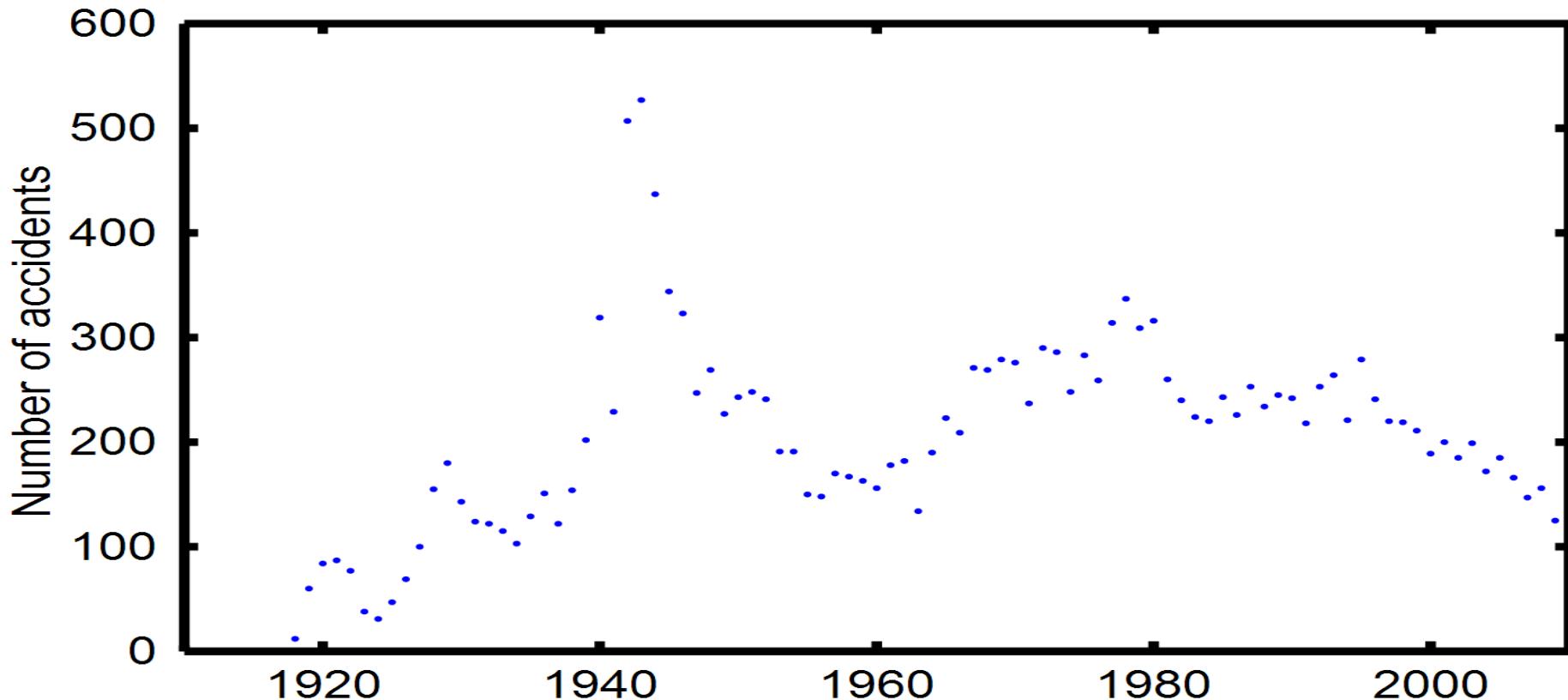
- Threat information
- Attack signatures and Attack sources
- Collected by Govt. and Industry
- Shared in secret
- BONUS: Maybe with your personal data too.



# Why didn't we follow these models?



ACRO: air accident incidents 1918-2009



## NATIONAL TRANSPORTATION SAFETY BOARD

## PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

This form to be used for reporting civil and public use aircraft accidents and incidents

## BASIC INFORMATION

## Accident/Incident Location

Nearest City/Place: Stow State: MA  
 ZIP: 01775 Country: USA  
 Latitude: 42:27.64N (dd:mm:ss N/S) Longitude: 71:31.07W (ddd:mm:ss E/W)

## Date/Time

Date: 04/20/2013  
mm/dd/yyyy Local Time: 1305  
 Time Zone: EDT

## Phase of Operation

- |                                   |  |                                      |                                  |
|-----------------------------------|--|--------------------------------------|----------------------------------|
| <input type="checkbox"/> Standing | <input type="checkbox"/> Takeoff (incl. initial climb) | <input type="checkbox"/> Cruise      | <input type="checkbox"/> Hover   |
| <input type="checkbox"/> Taxi     | <input type="checkbox"/> Climb                         | <input type="checkbox"/> Maneuvering | <input type="checkbox"/> Other   |
| <input type="checkbox"/> Descent  | <input checked="" type="checkbox"/> Landing            | <input type="checkbox"/> Approach    | <input type="checkbox"/> Unknown |

## Collision with Other Aircraft

- Midair  
 On-ground  
 None

## Altitude of In-Flight Occurrence

ft MSL

## AIRCRAFT INFORMATION

Manufacturer: CessnaModel: 172NSerial Number: 172-70435Registration Number: N739CKAmateur-built:  Yes  NoMax Gross Weight: 2,550 lbsWeight at Time of Accident/Incident: 2,354 lbs

Location of Center of Gravity at Time of Accident/Incident:

42.2 inches from  nose or  datum  
 -or- Percent Mean Aerodynamic Cord (% MAC)

## Category of Aircraft

- Airplane  
 Balloon  
 Blimp/Dirigible  
 Glider  
 Gyrocraft  
 Helicopter  
 Powered lift  
 Ultralight  
 Unknown

## Type of Airworthiness Certificate

(Check all that apply)

## Standard

- Normal  
 Utility  
 Aerobatic  
 Transport

## Special

- Restricted  
 Limited  
 Provisional  
 Experimental  
 Special Flight  
 Light Sport

Number of Seats: 4

If Large Aircraft, how many seats for:

Flight Crew: \_\_\_\_\_

Cabin Crew: \_\_\_\_\_

Passengers: \_\_\_\_\_

## Landing Gear

Retractable  
 Check any additional landing gear configuration that applies:

- Tricycle  Tailwheel  
 Amphibian  High Skid  
 Emergency Float  Skid  
 Float  Ski  
 Hull  Ski/Wheel  
 Unknown

## Type of Maintenance Program

- Annual  
 Conditional (Amateur-built only)  
 Manufacturer's Inspection Program  
 Other Approved Inspection Program (AAIP)  
 Continuous Airworthiness  
 Other, specify: \_\_\_\_\_

## Last Inspection Type

- 100 Hour  Continuous Airworthiness  
 AAIP  Conditional Inspection  
 Annual  Unknown

Date Last Inspection: 04/03/2013mm/dd/yyyyAirframe Total Time: 5,834 hrs

hours measured at (check one)

- Last Inspection  Time of Accident/Incident

### **NARRATIVE HISTORY OF FLIGHT (Please type or print in ink)**

Describe what occurred in chronological order, including circumstances leading to and nature of accident/incident. Describe terrain and include wreckage distribution sketch if pertinent. Attach extra sheets if needed. State time and point of departure, intended destination, and services obtained.

We left 6b6 at roughly 1240 EDT. Went northeast then turned westerly made a large loop around R4102 headed back to the airport on a southerly heading and entered the pattern form a 45 tho the left downwind on runway 30. Flew downwind and base for a normal left pattern. On final began to pick up gusts. Below the treeline wind shear picked up. on short final roughly 75' AGL I lost lift do to wind shear. I added power to compensate and to go around I touched on the threshold and was going around when a gust pushed me to the left when I relized i wasnt going to make it over the trees I reduced power and tried to turn right to stay over the runway. I hit trees on the left of the runway and came to a stop. I confirmed nobody was hurt and had them egress from the left side door while i seured the plane(tried to pull mixture but it was stuck at full, turned off fuel selector, turned of magnetos, and turned off batteries).

### **RECOMMENDATION (How could this accident/incident have been prevented?)**

#### **Operator/Owner Safety Recommendation**

A weather reporting station would have told me how much wind was gusting on the airport. A wind sock within sight of Runway 30 would have helped detect gusts and crosswinds.

# NTSB Incident Reports

- Designed to learn from incidents and Improve
- Root cause analysis
- Recommendations
- Public Investigation for serious incidents
- Follows sound engineering principle of learning from failures.

Outcome is Safety Recommendations and Safety Alerts

*“Recommendations are sent to the organization best able to address the safety issue, whether it is public or private.”*

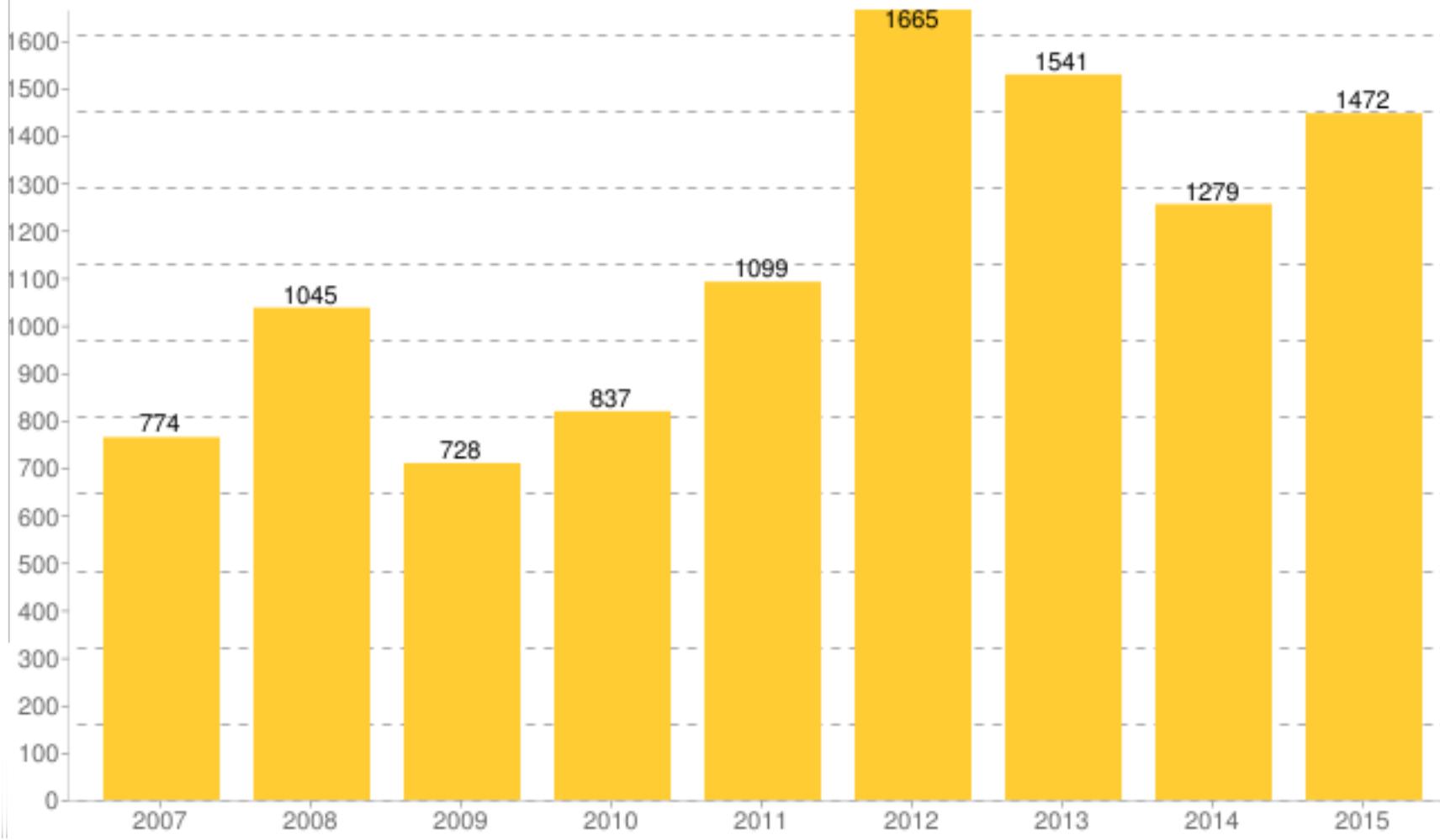


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**★ Activate Leading Edge Deice Boots  
As Soon as Airplane Enters Icing Conditions**

***Thin amounts of ice, as little as 1/4 inch, can be deadly***

## DataLossDB.org Incidents Over Time



# Police body cams found pre-installed with notorious Conficker worm

One of the world's most prolific pieces of malware is found in cams from Martel.

by Dan Goodin - Nov 16, 2015 1:19pm EST

 Share

 Tweet

 Email

44

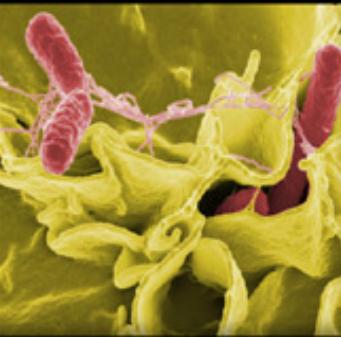




Think about getting Cholera in 2016. Its always there. You become infected it when you don't have proper sanitation.

Are we protecting  
against adversaries,  
accidents or  
diseases?

Are attackers really just  
organisms looking for the  
right opportunity or  
environment to survive?



A white toaster is shown from a side-on perspective. Two slices of bread are popping out of the slots. The top slice is significantly burnt and is engulfed in small flames. The bottom slice is also heavily charred. The toaster is set against a light-colored wall.

Are we protecting  
against adversaries,  
accidents or  
diseases?

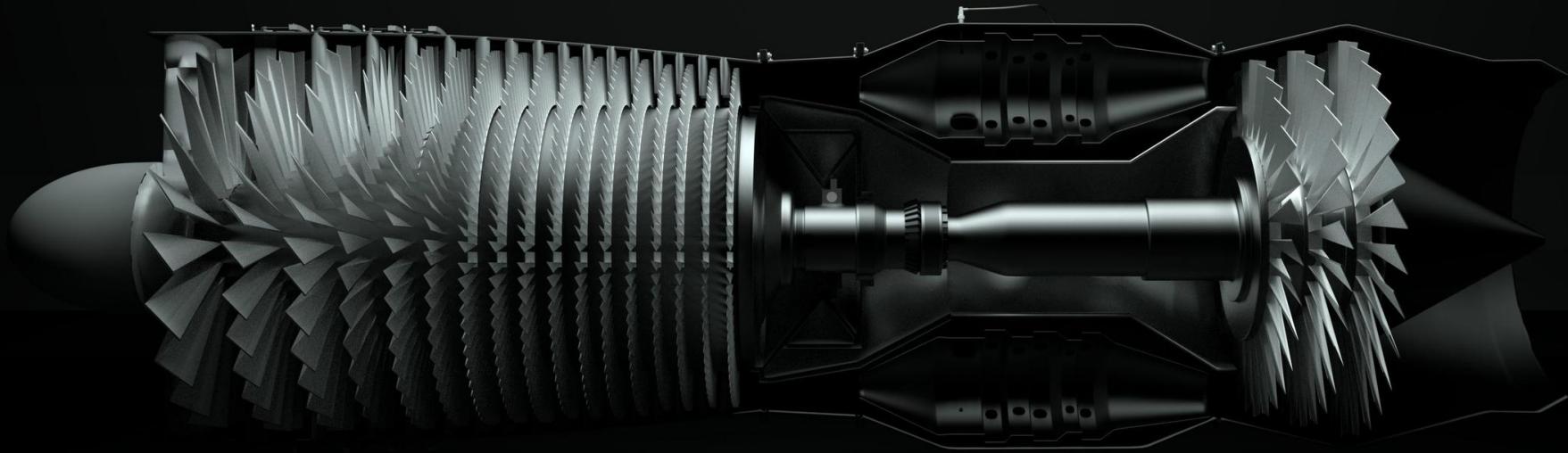
Are security incidents the  
natural phenomena of  
interconnected systems  
that aren't designed to be  
safe?

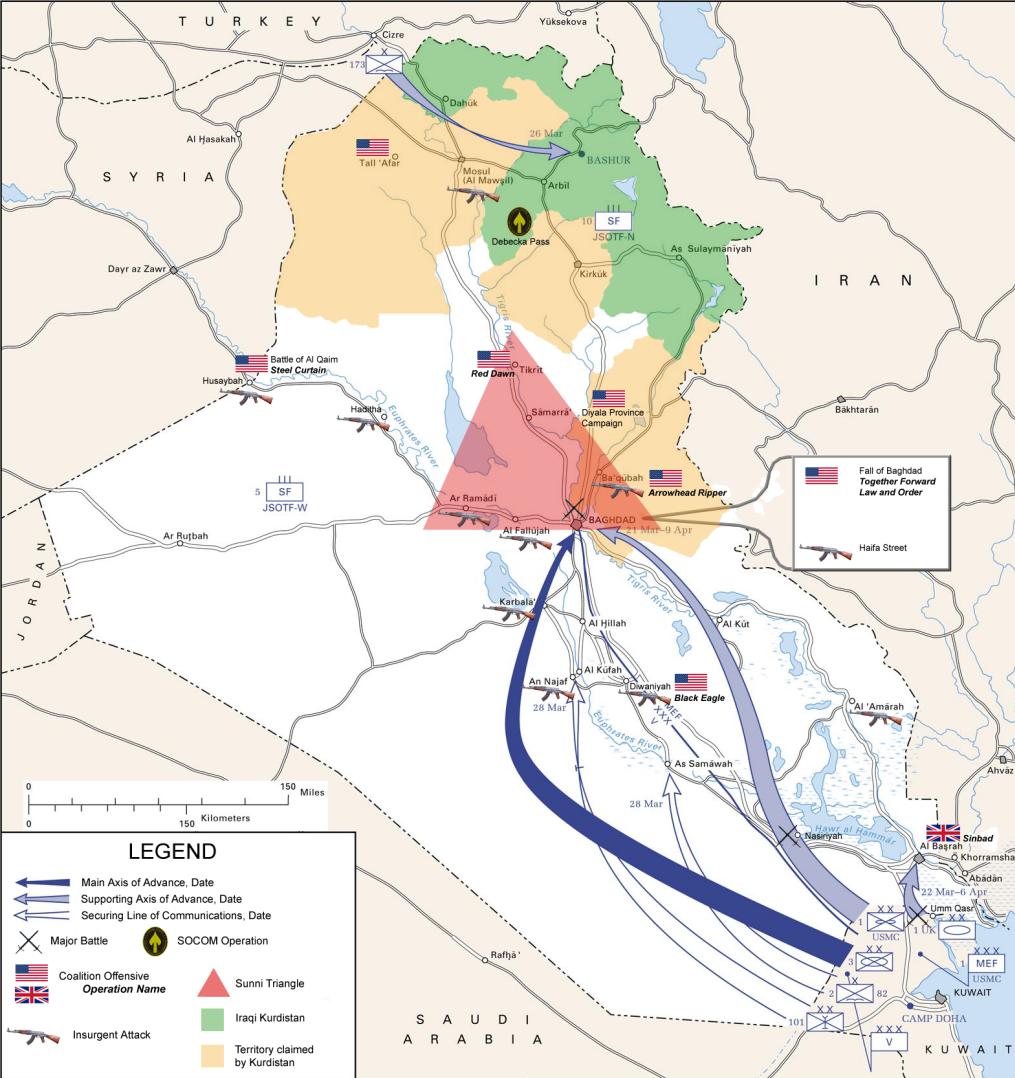
# Is the InfoSec paradigm closest to safety?

Alex Stamos comments, “A secure system is safe if it is operated correctly. A safe system is safe if it is operated.”

I’ll add the unspoken, “even in the presence of an attacker.”

If we use safety as a paradigm we can learn from Aviation, Workplace Safety, Consumer Protection, UL, and the engineering disciplines.





If we use war as a paradigm we will learn from and operate like the military.

Do we want our daily lives to operate like a battlefield constantly surveilling for attackers and fighting them off? Likely with a lot of secrecy.

Or do we want to use safe equipment and follow good hygiene?



# Secrecy keeps markets from functioning

Transparency  
can unlock  
market  
dysfunction.

# FTC wins case against Wyndham Hotels

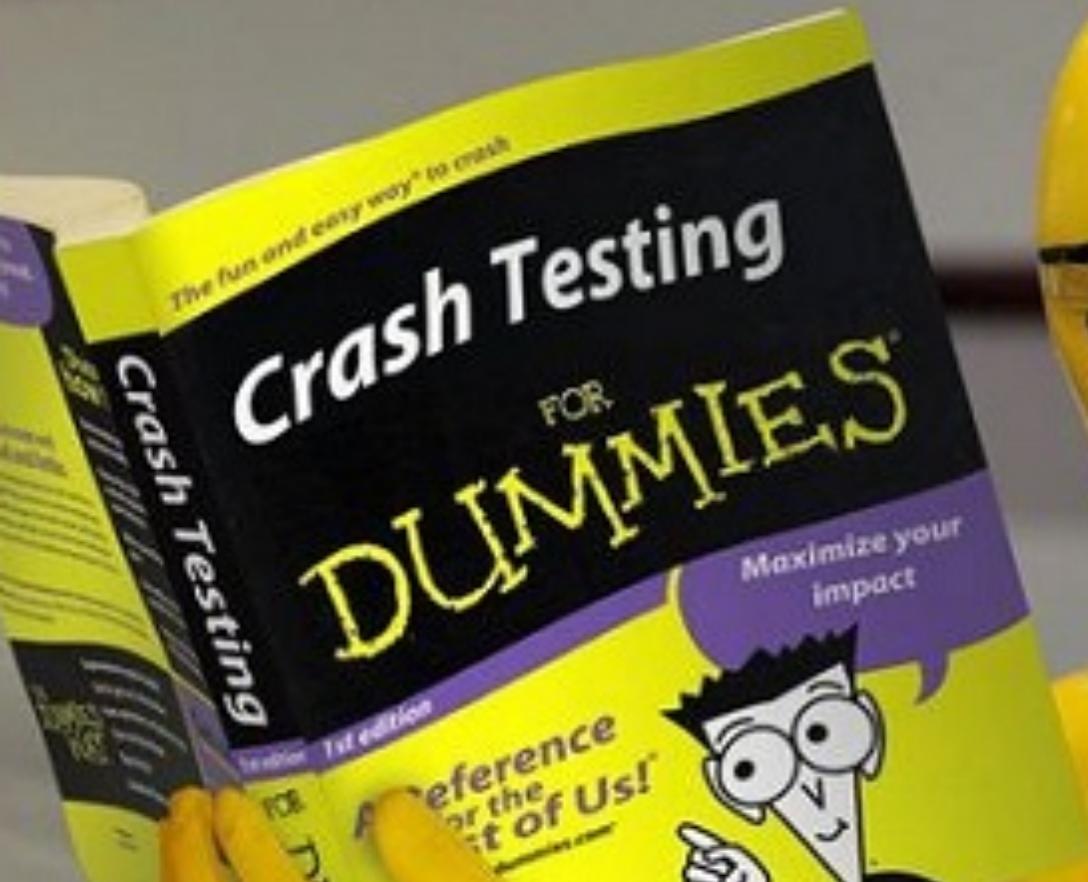


## Cybersecurity Disclosure Act of 2015



# Ask a software vendor

- Is your software safe?
- How do you know?
- Just from this week:
  - Trend Micro Password Manager
  - The Ring WiFi-enabled video doorbell



# Questions



Chris Wysopal

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