What Scares the Living IT Out of Me

THE HISTORY OF THE FUTURE
(UN-PC VIEWS ON SECURITY)

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MY WIFE'S SNORING

WHAT SCARED ME IT-LESS 1989-1992

- Class I-IW: Loss of Privacy
  - Creeping Surveillance (Gov)
  - "You" Massive
  - Identity Theft
- Class II-IW: Unrestrained Espionage
  - Company/Company
  - Nation-state
- Class III-IW: Cyberwar/Infowar
  - Asymmetry (APT)
  - Cyberterrorism
  - Nation-state cyber conflict
  - Confocal Infrastructural Vulnerabilities

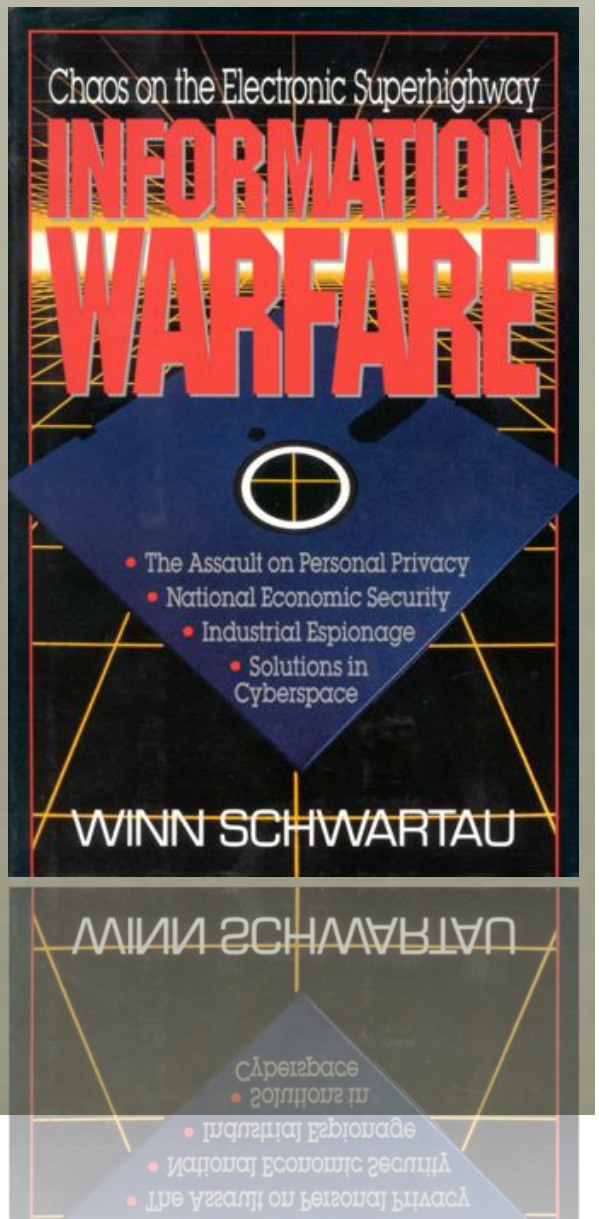
SCARED:
3 SECURITY DOMAINS

HUMAN

IGNORANCE
(APATHY & ARROGANCE)

NOBODY GIVING AN IT ☺

- "Electronic Pearl Harbor"
  - *Winn Schwartau testified before Congress on June 27, 1991 (Coined the phrase)*
- "Electronic Pearl Harbor"
  - *CIA Director John Deutch testified before Congress, June 26, 1996*
- "If the nation went to war today, in a *cyberwar*, we would lose."
  - *Mike McConnell, U.S. DNI (2007-9)*
- "There is the cyber capability to basically to virtually paralyze our country."
  - *January, 2012, Leon Panetta*



NON-GLOBAL VIEWS

CHINA

NUCLEAR WEAPONS ARE UNNECESSARY!
WESTERN BANKS
hack hack hack
U.S. POWER GRIDS
hackety hack
PENTAGON

DIRTY 4-LETTER WORDS

DIRTY 4-LETTER WORDS: REDUX

INSIDERS: A FAILURE TO PROFILE

- Errors
  - (Omissions and typos)
- Intent
  - (Improper vetting)
- Technical
  - (Root)
- Users
  - (Root of all error…)

LAWYERS

1 • Mar. 14, 2005 A Legal Journal serving Madison &

Alton attorney accidentally sues himself

Emert

By Steve Korris

Alton attorney Emert Wyss

chosen Centerre Title--a company that Wyss owned--close her loans.

In the course of the attorne

I CAN'T DEFEND MYSELF

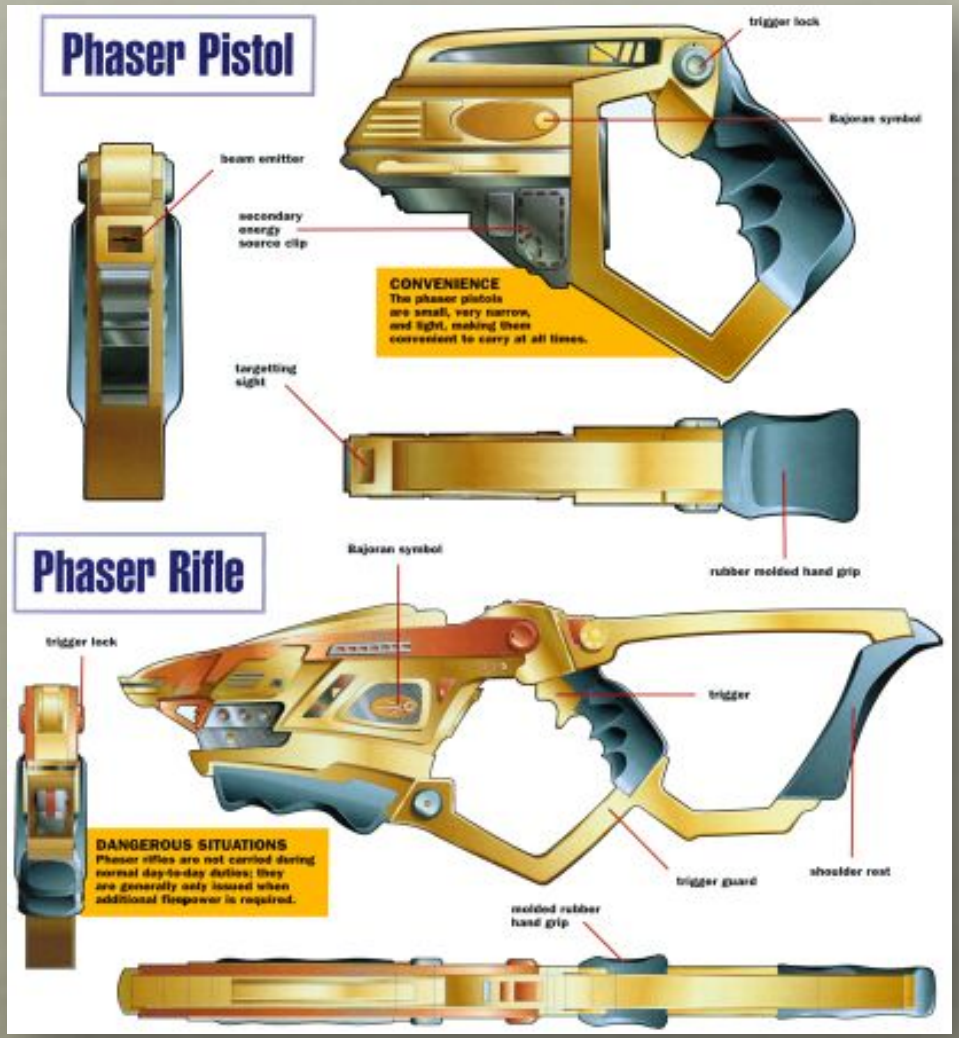
TECHNICAL

VENDORS

1989-1994: *WE WARNED YOU*: THE WEAPONIZATION OF THE INTERNET

WEAPONIZATION OF EVERYTHING

- IT - Oriented
- Sort of IT- Oriented
- Other Technical



ITTY DEFENSE

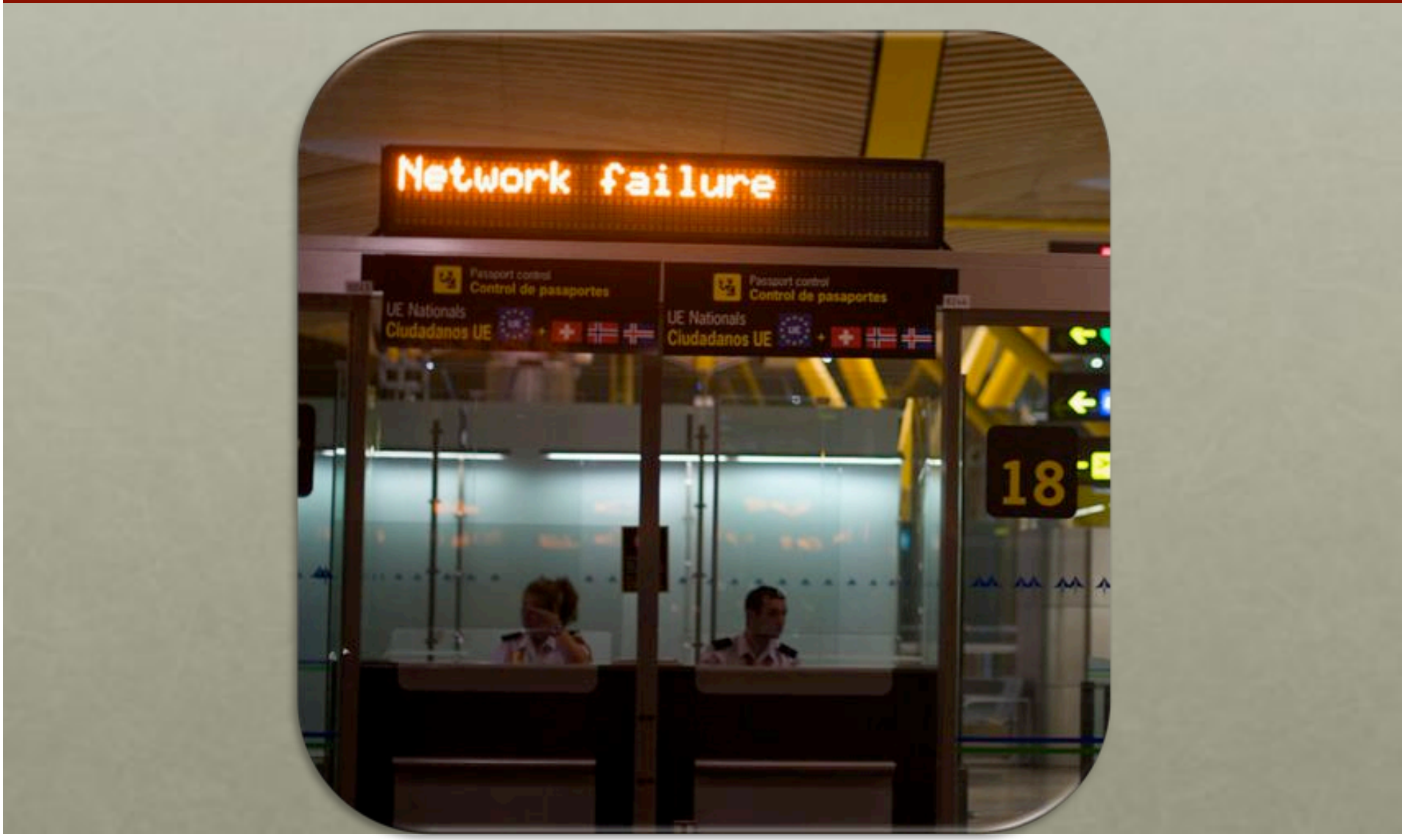
- Trying the same thing over and over in the hopes of getting a different result.

ASYMMETRICAL KINETIC RESPONSE

COMPLEXIFICATION

SIMPLIFICATION

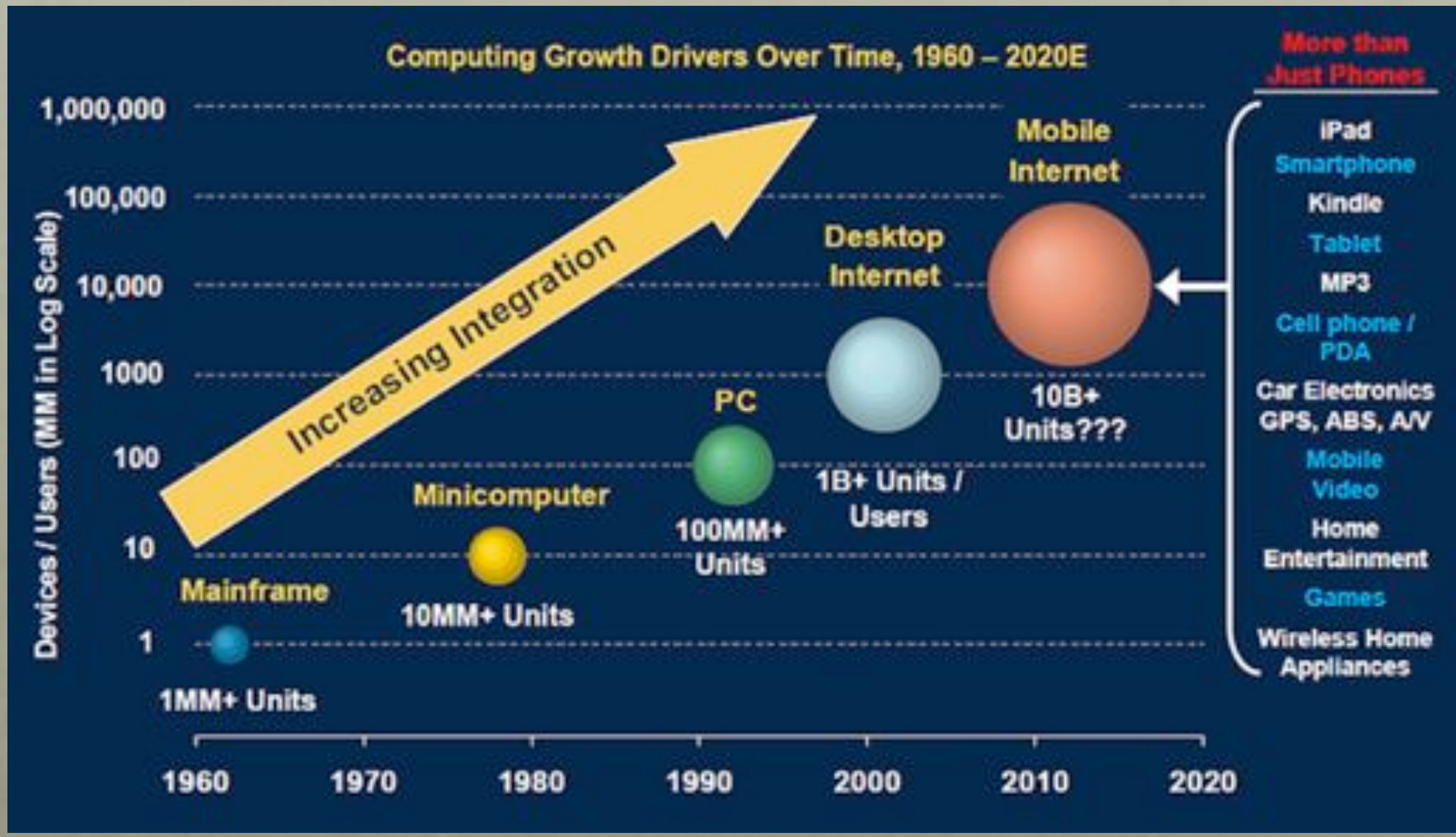
OVER-RELIANCE:
BINARY DEGRADATION = EPIC FAIL



CLOUDBURSTS

4G

2014: 4 BN MOBILE DEVICES: 2020: ~ 20 BN



Thus, the perfect storm of security

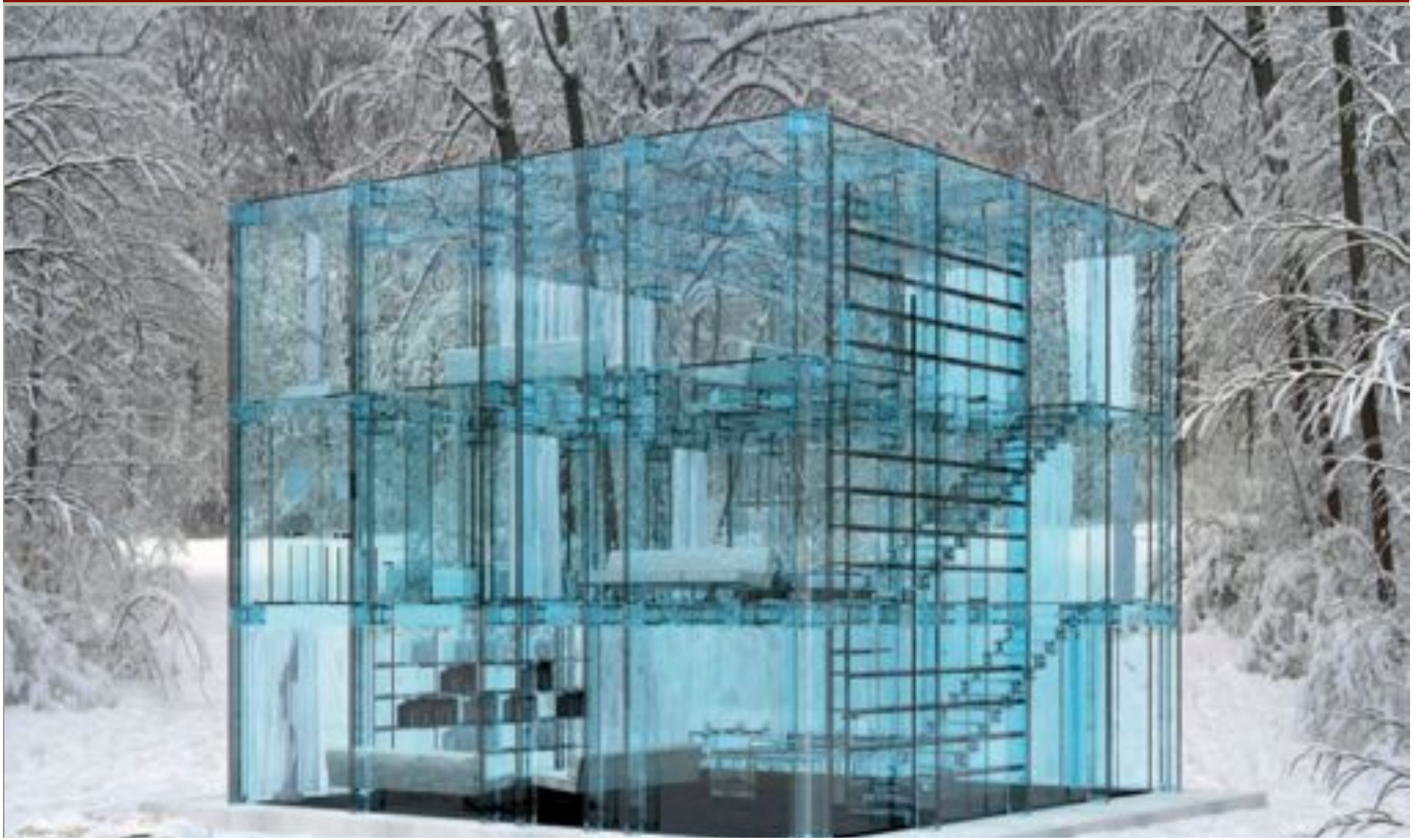
- **Billions of intelligent mobile endpoints**
- **An inherently insecure backbone infrastructure**
- **Clueless users**
- **Smart bad guys**

Sandboxing

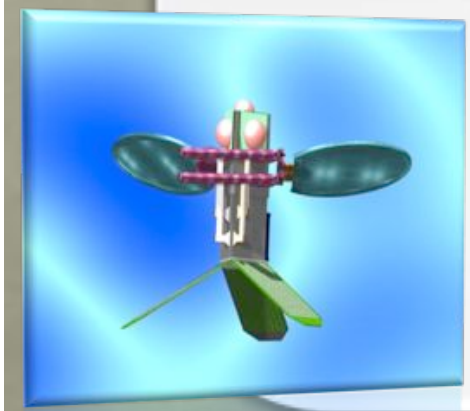
- Which ‘One’ container are you going to protect?
- Is good really good enough?
- What’s the downside?

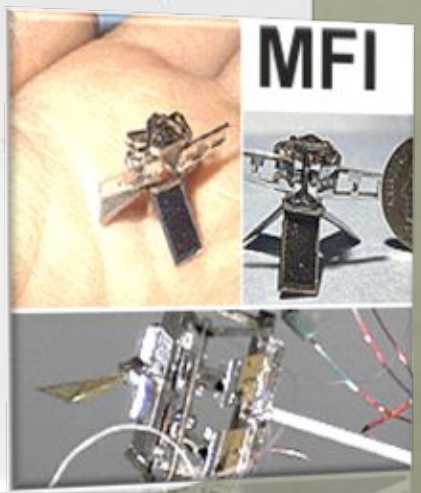
FUTURE FEAR!

NO MORE PRIVACY…AT ALL



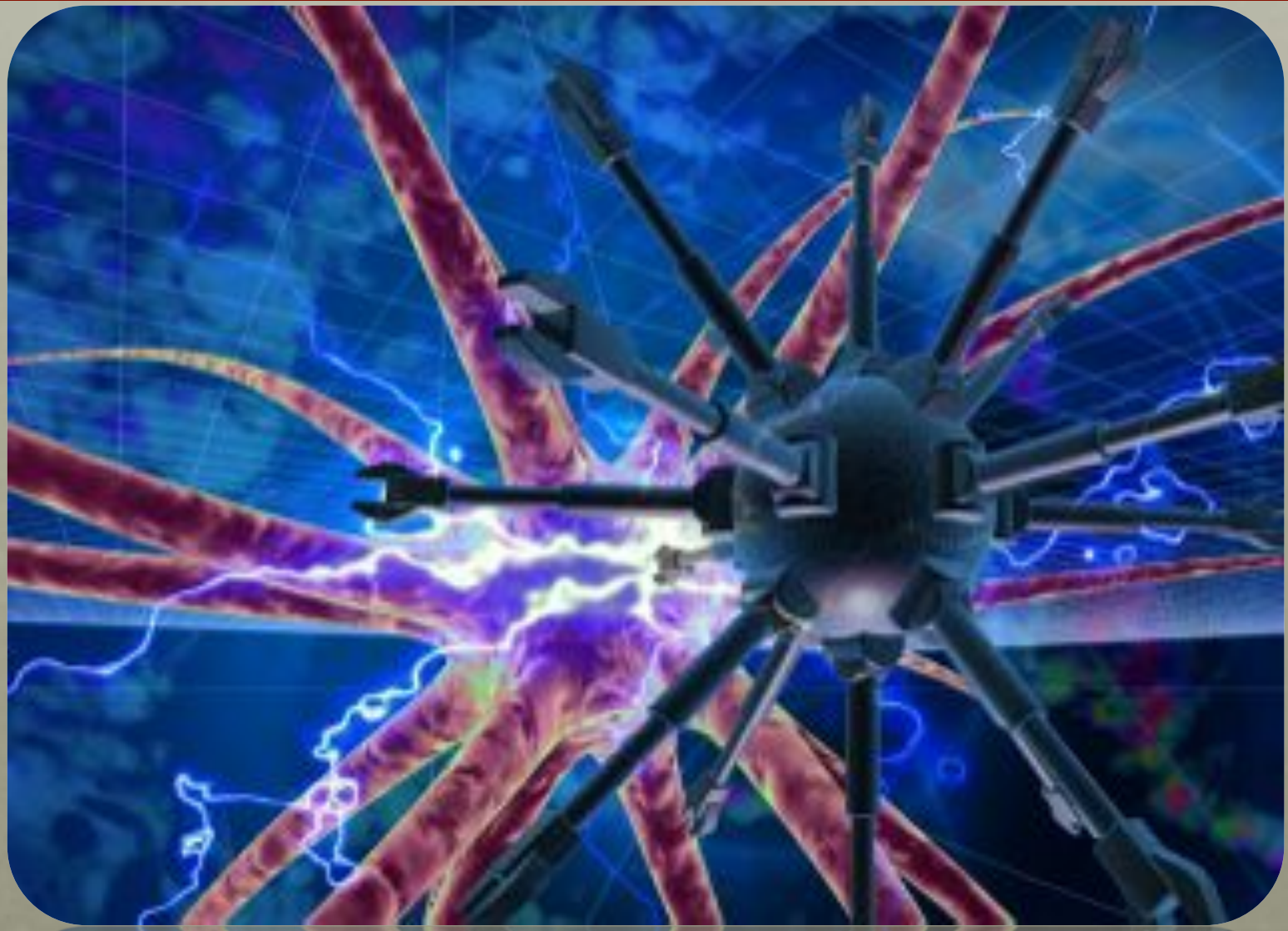
BUGS





POOR MAN'S TERRORIST HERF & EMP

NANOTECHOLOGY



THE SUM OF ALL FEARS

- Idiots in politics
- Ignorance in business
- Apathetic about warnings
- Arrogance about Preparation

- THIS one REALLY scare the Livin' IT out of me…

NOT IF, BUT WHEN…

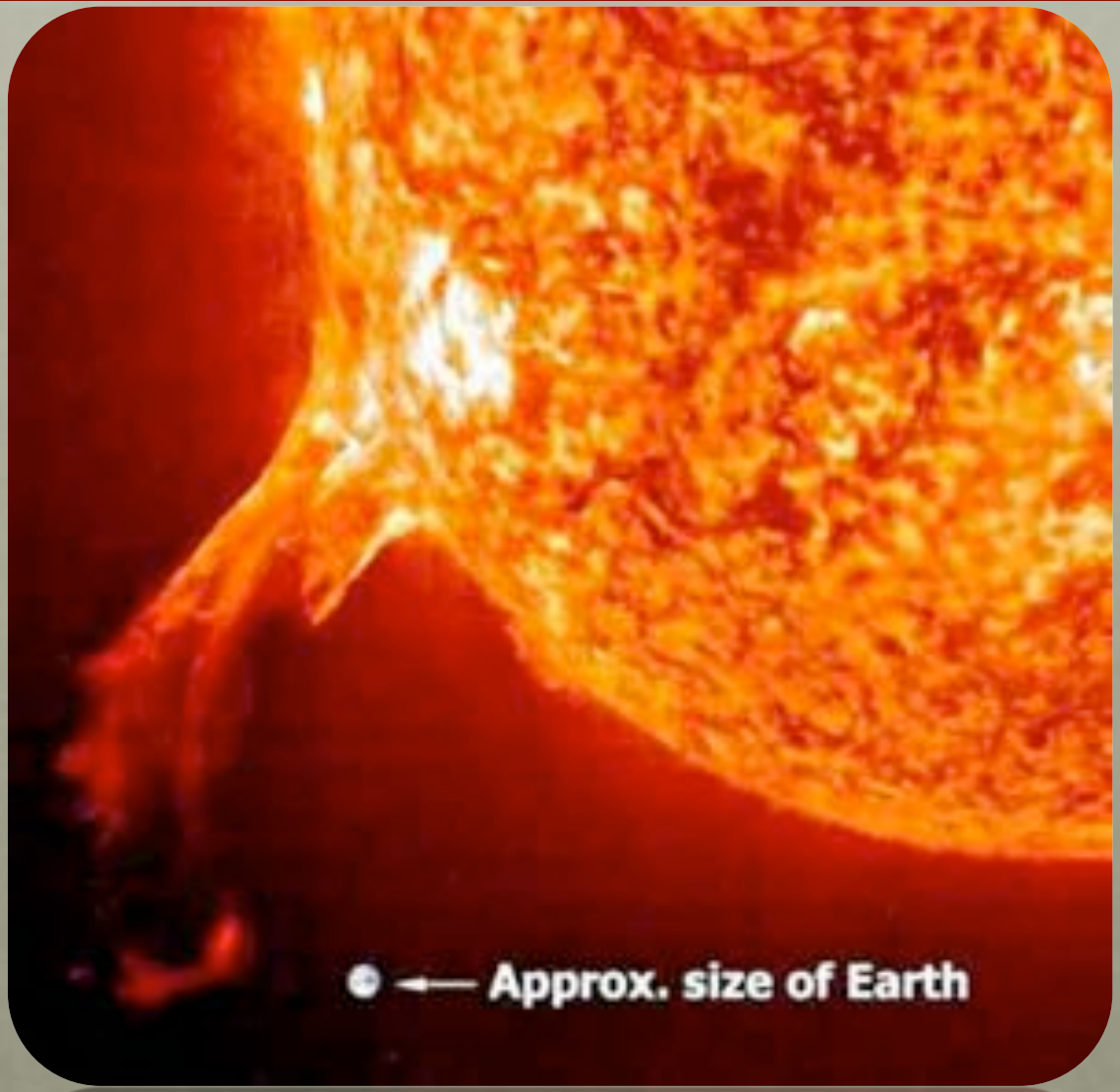
CARRINGTON EFFECT: 1859

- 2 September, 1859
  - Skies all over planet Earth erupted in red, green, and purple auroras.
  - Newspapers could be read as easily as in daylight.
  - Auroras pulsated even at near tropical latitudes over Cuba, the Bahamas, Jamaica, El Salvador, and Hawaii.
  - Telegraph systems worldwide went haywire.
  - Spark discharges shocked telegraph operators and set the telegraph paper on fire..

CARRINGTON EFFECT: 1972-2012

- August 4, 1972
  - Huge solar flare knocked out telephone communication across Illinois.
  - AT&T redesigned its power system for transatlantic cables
- March 13, 1989,
  - Geo-storms plunged Québec Canada and 6 million people into blackness
- December, 2005
  - Aurora-induced power surges melted power transformers in New Jersey.

CARRINGTON EFFECT: 2012+



CARRINGTON: WORST CASE

- Damage to the 900-plus satellites currently in orbit:
  - $130 - $270 billion
- 10 year rebuilding of infrastructures

The Singularity

- 2035
- The Rise of the Machines

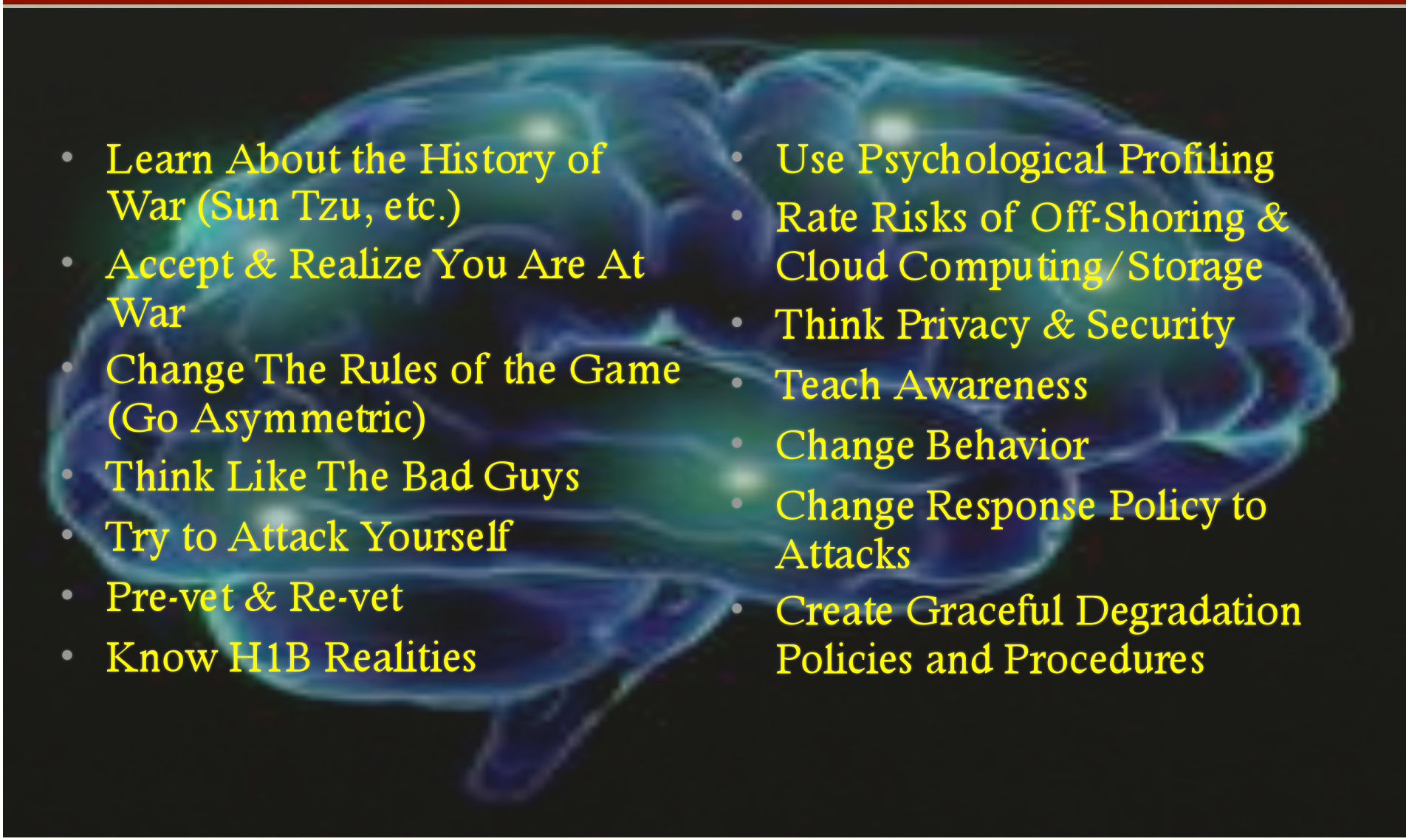
THE UNKNOWN

Three Key Components for Success
* Capability * Intent * Will *

We can stop the fear: technical

- Machiavellian Port Controls
  - USB & Network (Ethernet/802/Blue/IR, etc.)
- Monitor Your Rep & Creds
  - Know Who's Saying What
- Know What Your Own People Are Doing
  - From Work & Home
- Ban smart devices?
  - Geo-Manage I/O controls (a la NSA)
- Biscuit Tin Security?
- Disable Enemy Attack Weapons

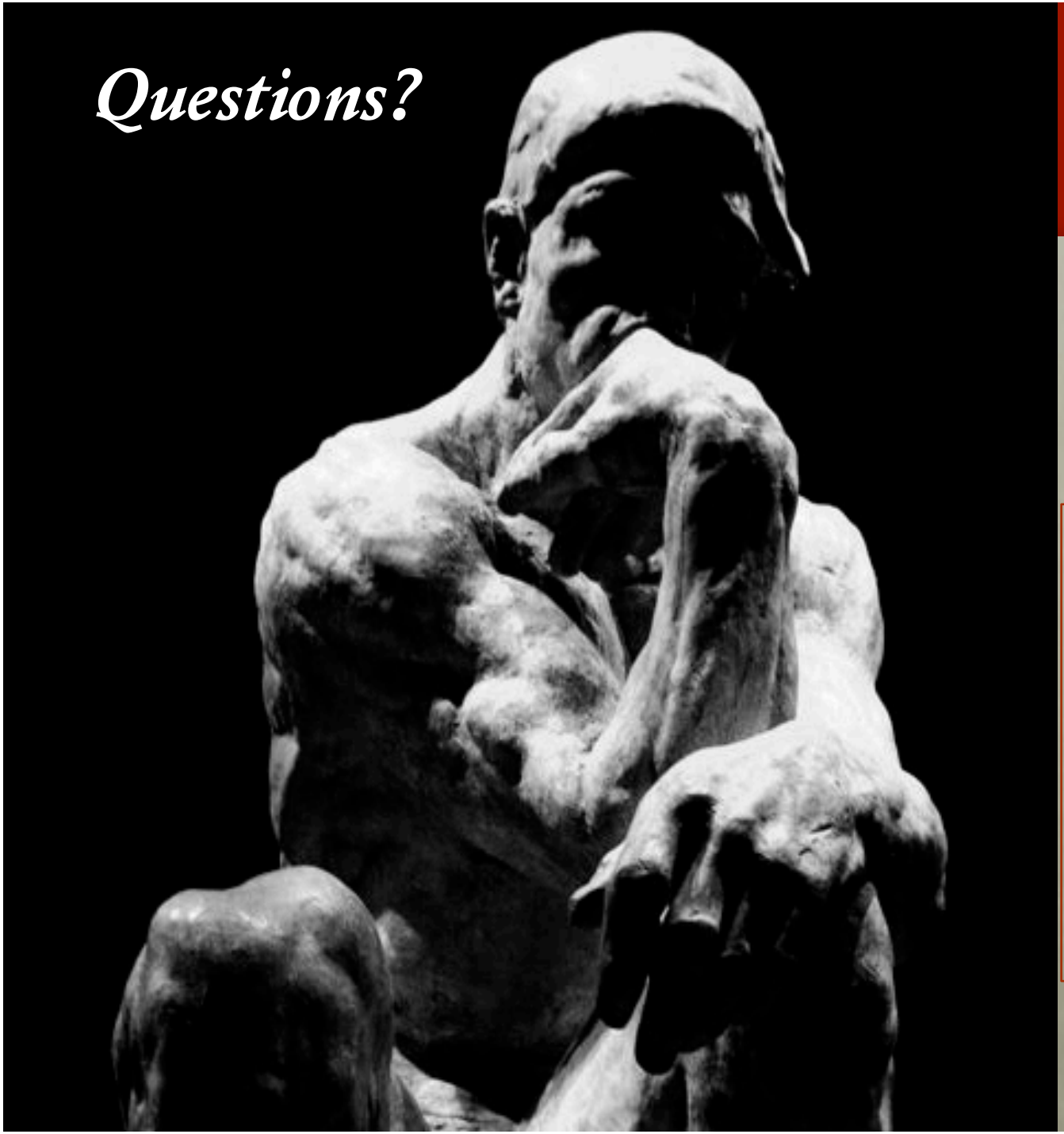
STOPPING THE FEAR: HUMAN



- Learn About the History of War (Sun Tzu, etc.)
- Accept & Realize You Are At War
- Change The Rules of the Game (Go Asymmetric)
- Think Like The Bad Guys
- Try to Attack Yourself
- Pre-vet & Re-vet
- Know H1B Realities
- Use Psychological Profiling
- Rate Risks of Off-Shoring & Cloud Computing/Storage
- Think Privacy & Security
- Teach Awareness
- Change Behavior
- Change Response Policy to Attacks
- Create Graceful Degradation Policies and Procedures

WHY DON'T WE?

- Let Hacker Communities Lead
- Teach Security history
- Embrace Failure
- Have trusted, self-repellent OS/ Operating Environments
- Measure security with the Time Metric?
- Know how to Stop DDoS?
- Build security in from the start?
- Do what's RIGHT?



Answers!

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