



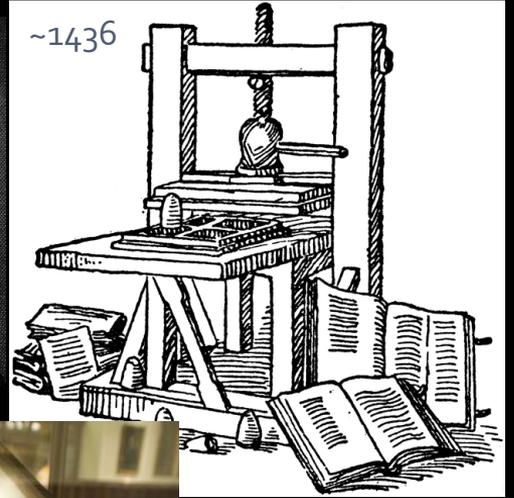
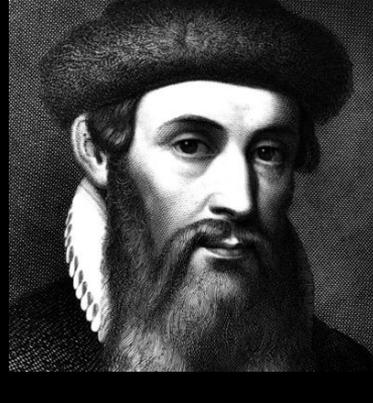
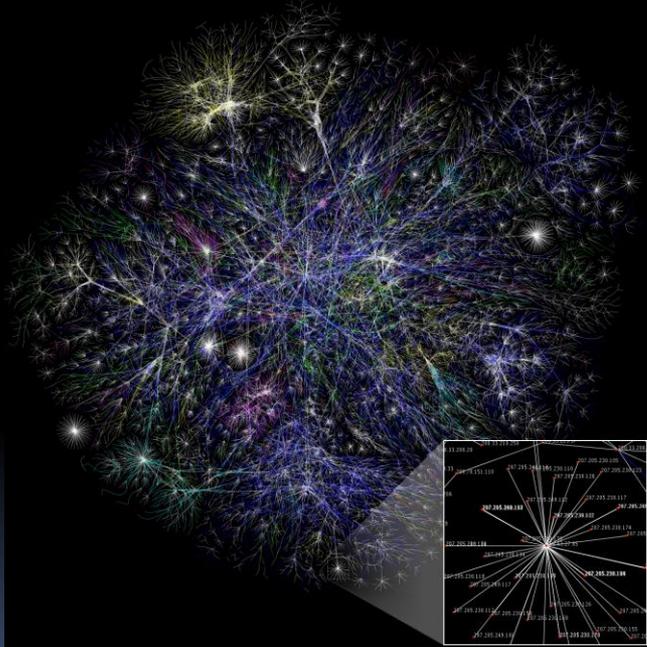
SAVING THE INTERNET

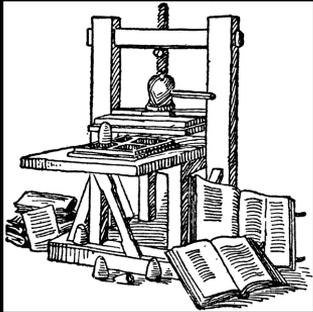
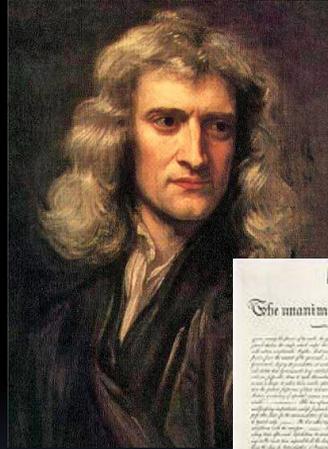
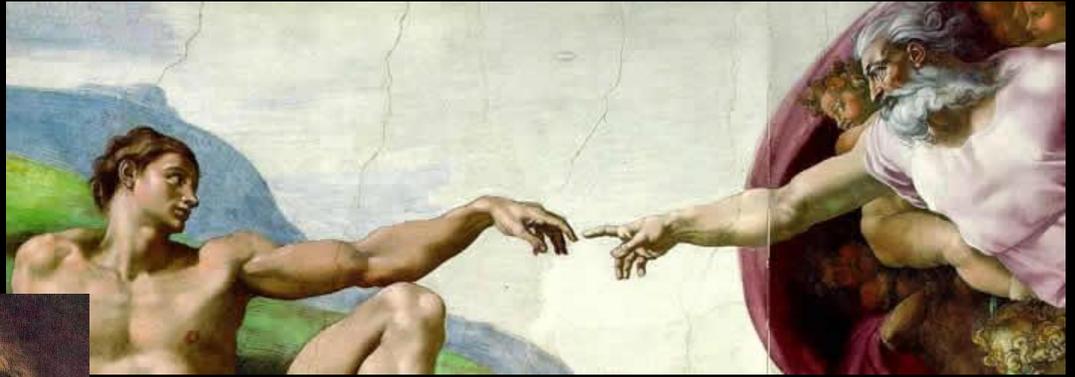
Jay Healey
Atlantic Council

@Jason_Healey

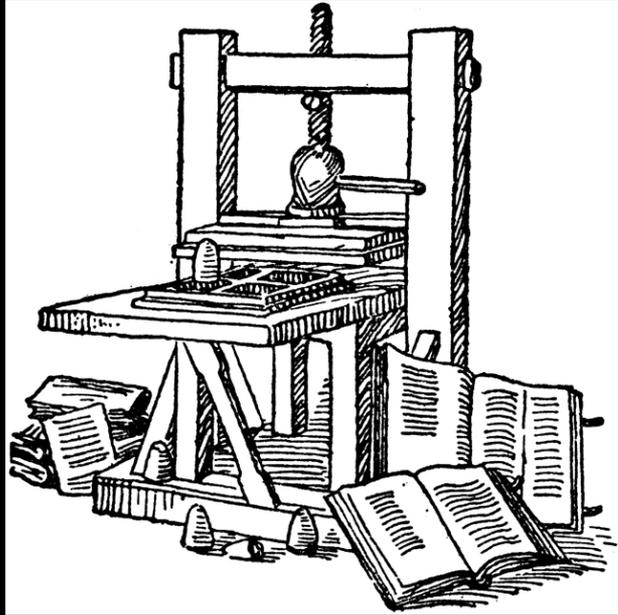
2S
DEFCON





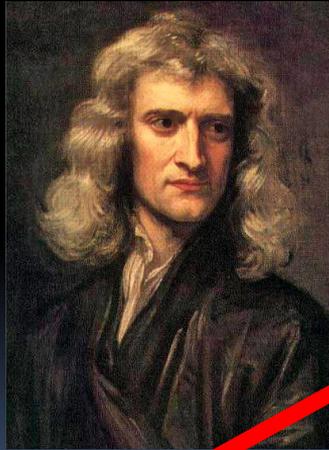
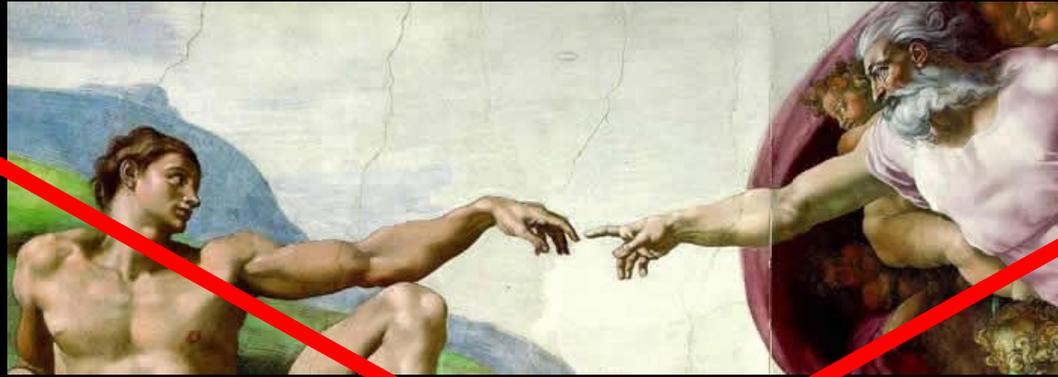


*"If there is something you know,
communicate it.
If there is something you don't
know, search for it."*

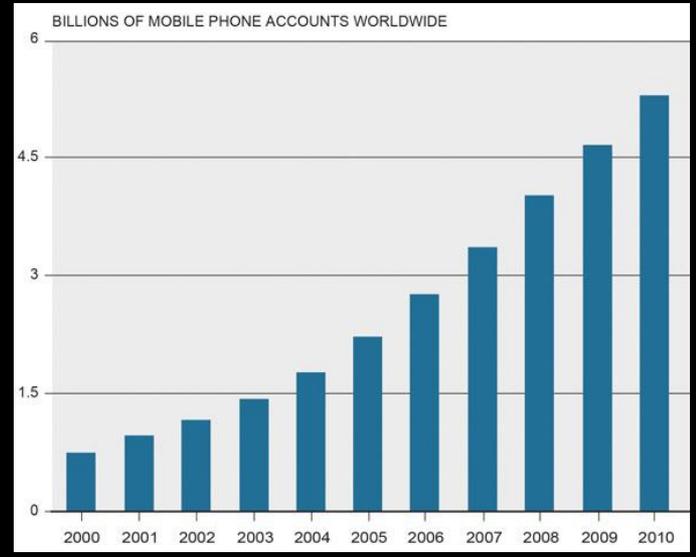
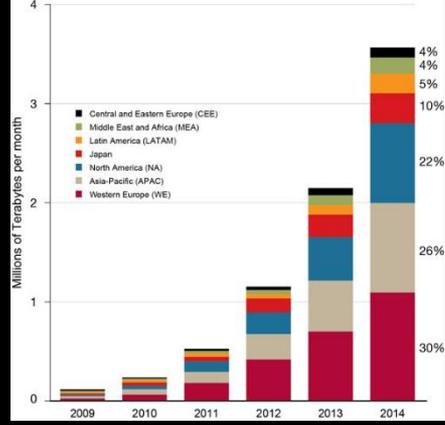
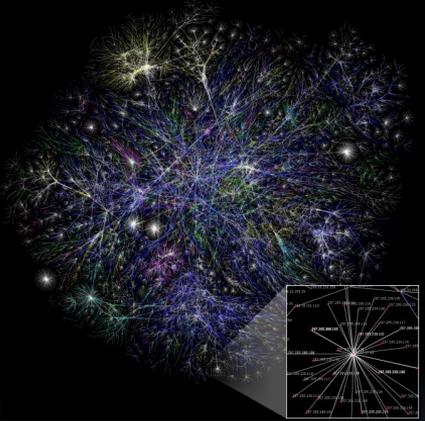


Violates Privacy? Civil Liberties?

Legal? Constitutional?

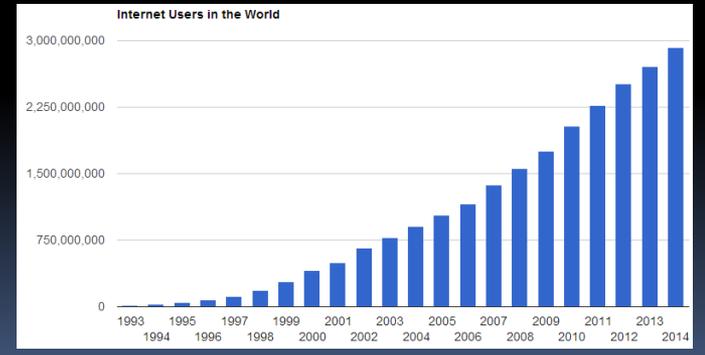


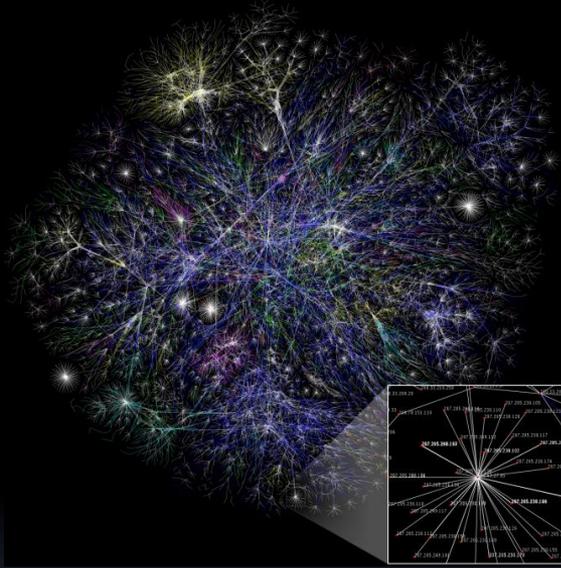
"If there is something you know, communicate it. If there is something you don't know, search for it."



Global Internet Users

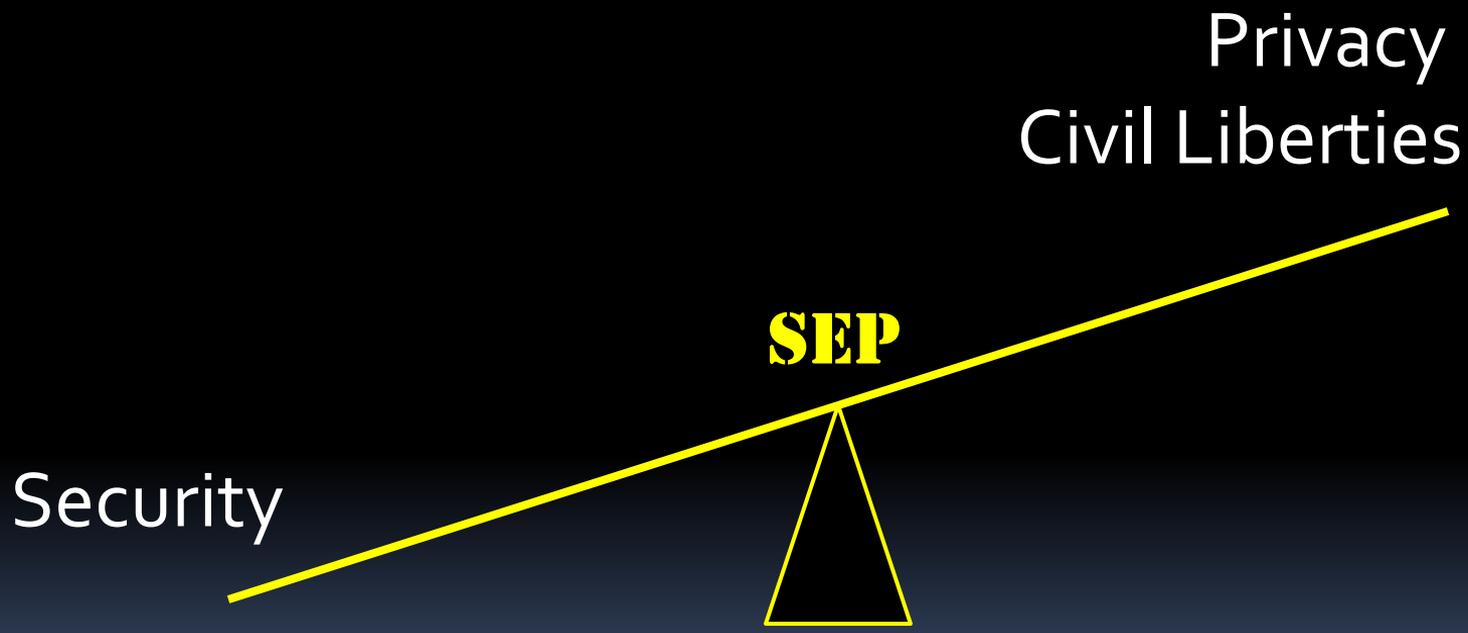
1993: 14 million
 2003: 778 million
 2013: 2.7 billion
 2030?
 2280?





Data breaches
Cyber crime
Anonymous
Malware
Espionage
State-sponsored attacks
Stuxnet
Heartbleed
Erection of borders

...
...
...



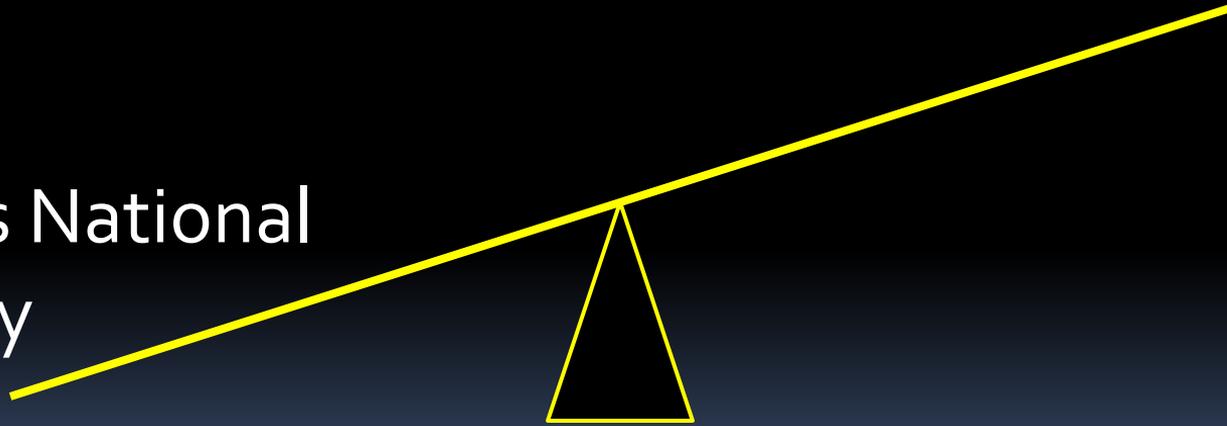
Security

SEP

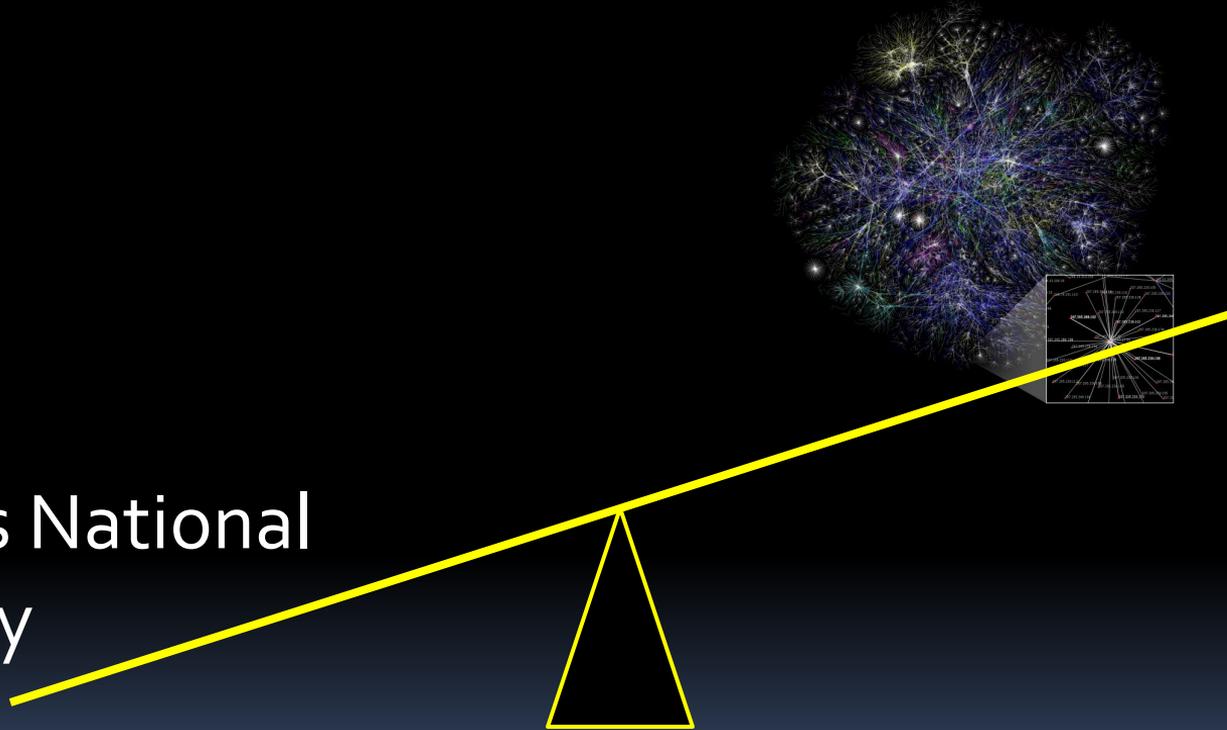
Privacy
Civil Liberties

Future Economic and
National Security

Today's National
Security

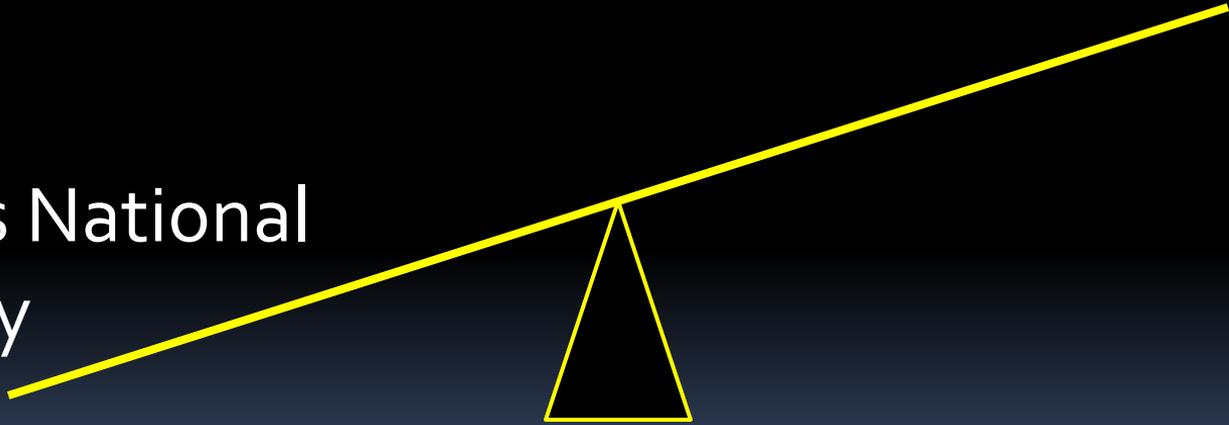


Today's National
Security



Future Possibilities
Until the End of
Humankind

Today's National
Security



How many future Renaissances and
Enlightenments will humanity miss

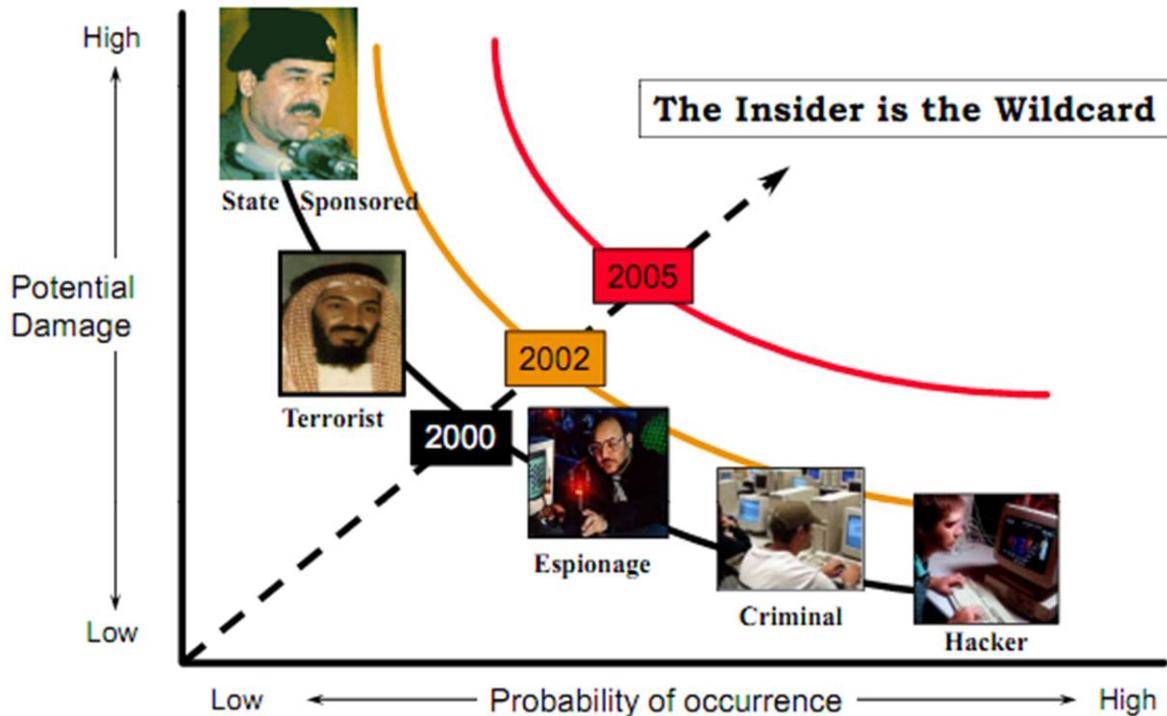
if we – all of us, for any purpose – keep
treating the Internet as a place for crime,
warfare and espionage?



SECURITY *FROM WHAT*



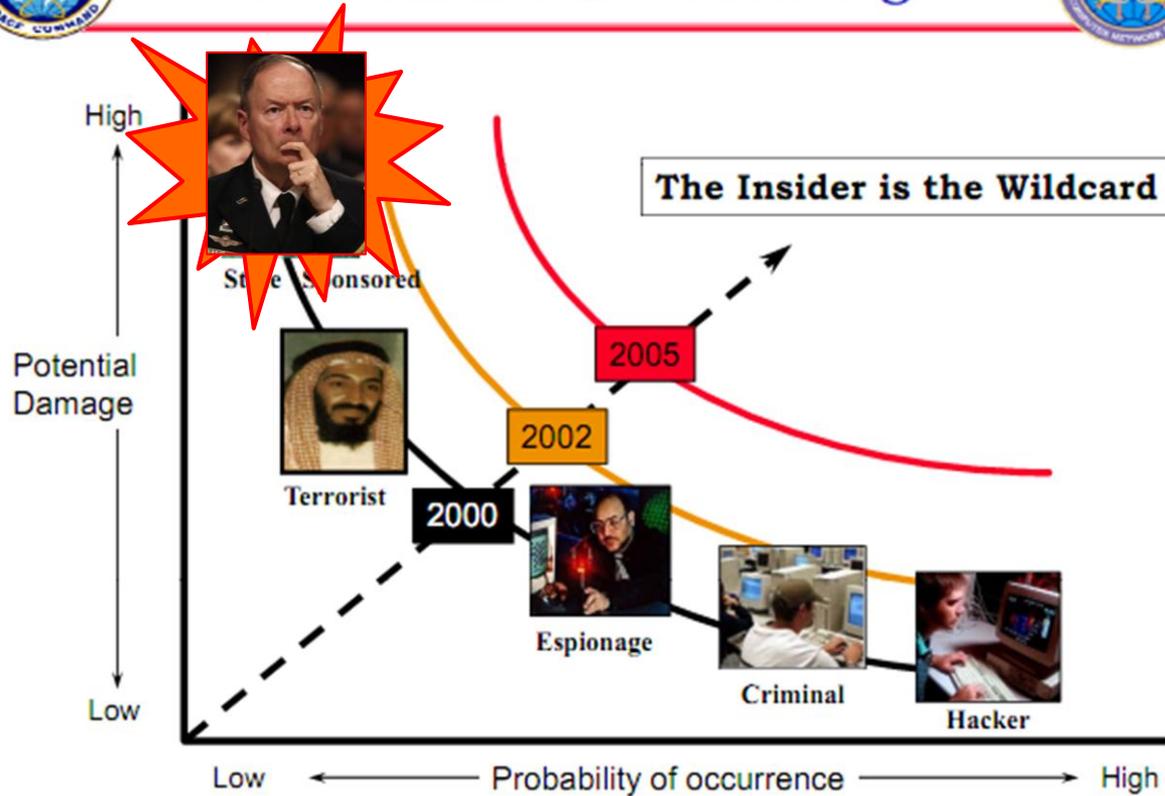
The Threat is Increasing



Source: 1997 DSB Summer Study



The Threat is Increasing



Source: 1997 DSB Summer Study



Why “Saving”

- The DT and complexity



Global Shocks

Initiated or Amplified Through the Internet

“As society becomes more technologic, even the mundane comes to depend on distant digital perfection.”

Dan Geer

“This increasingly tight coupling of the internet with the real economy and society means a full-scale cyber shock is far more likely to occur.”

“Beyond Data Breaches: Global Interconnections of Cyber Risk”



Bad Guys Finish First

“Few if any contemporary computer security controls have prevented a [red team] from easily accessing any information sought.”



Bad Guys Finish First

“Few if any contemporary computer security controls have prevented a [red team] from easily accessing any information sought.”

O>D

Doesn't Have to Stay This Way

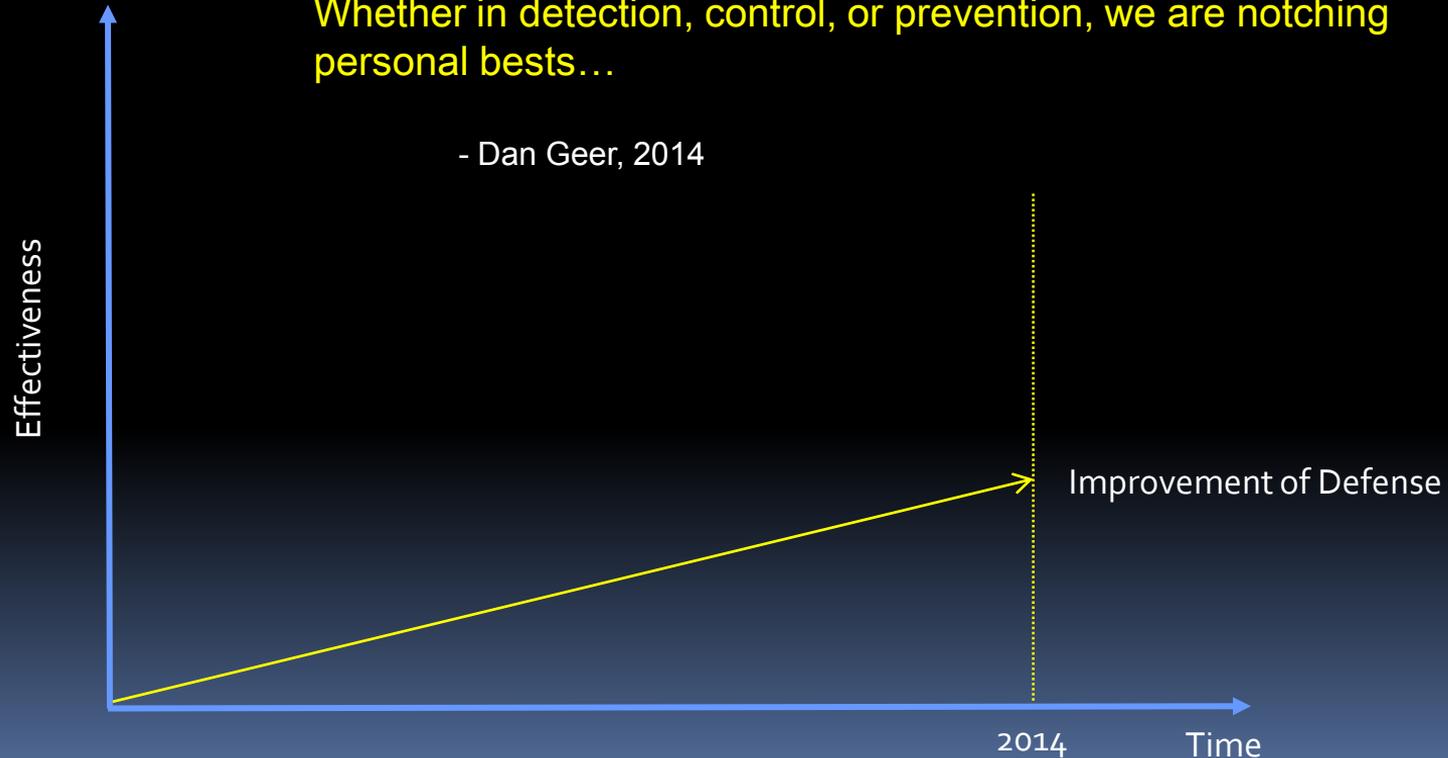




Great News! Security is Getting Better!

Whether in detection, control, or prevention, we are notching personal bests...

- Dan Geer, 2014



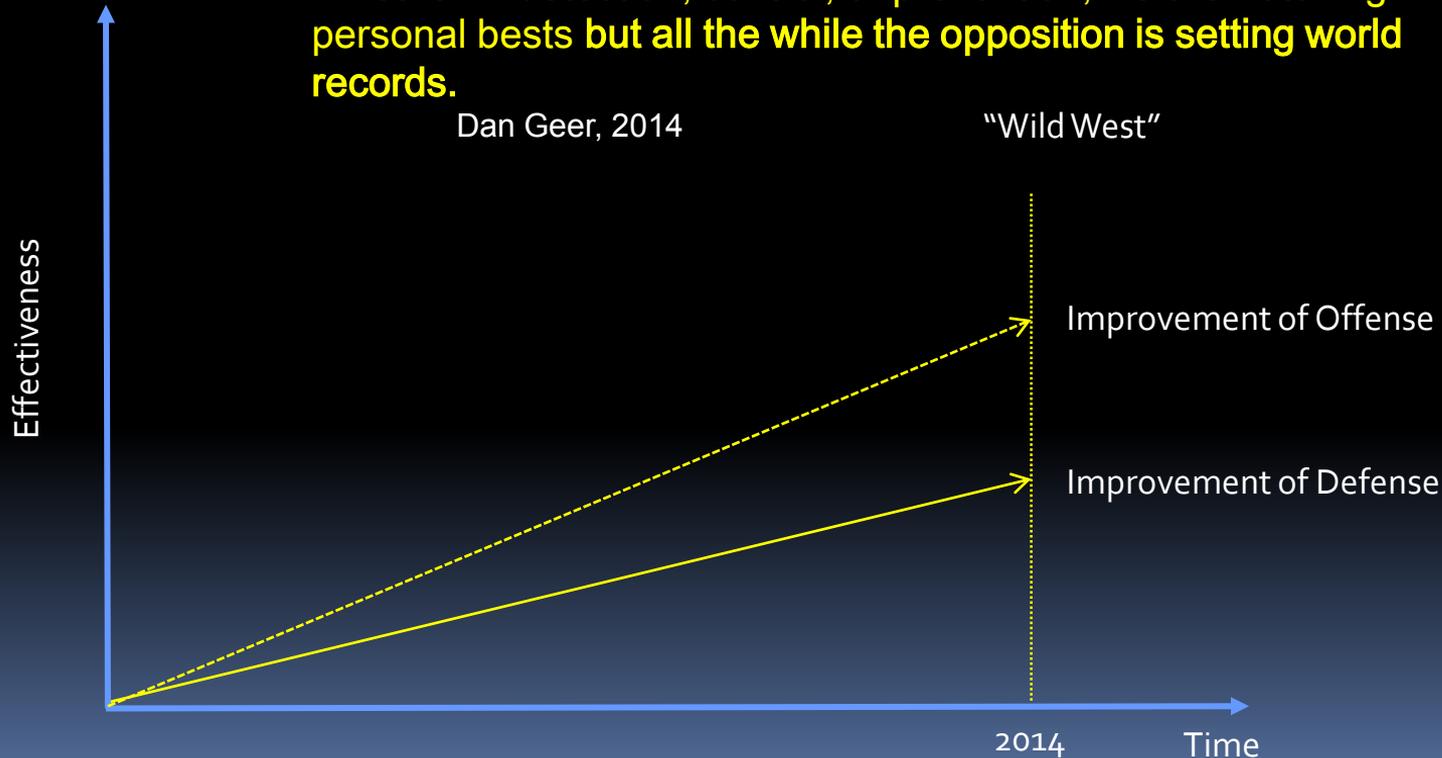


Bad News! We're Still Losing and at a Faster Rate!

Whether in detection, control, or prevention, we are notching personal bests **but all the while the opposition is setting world records.**

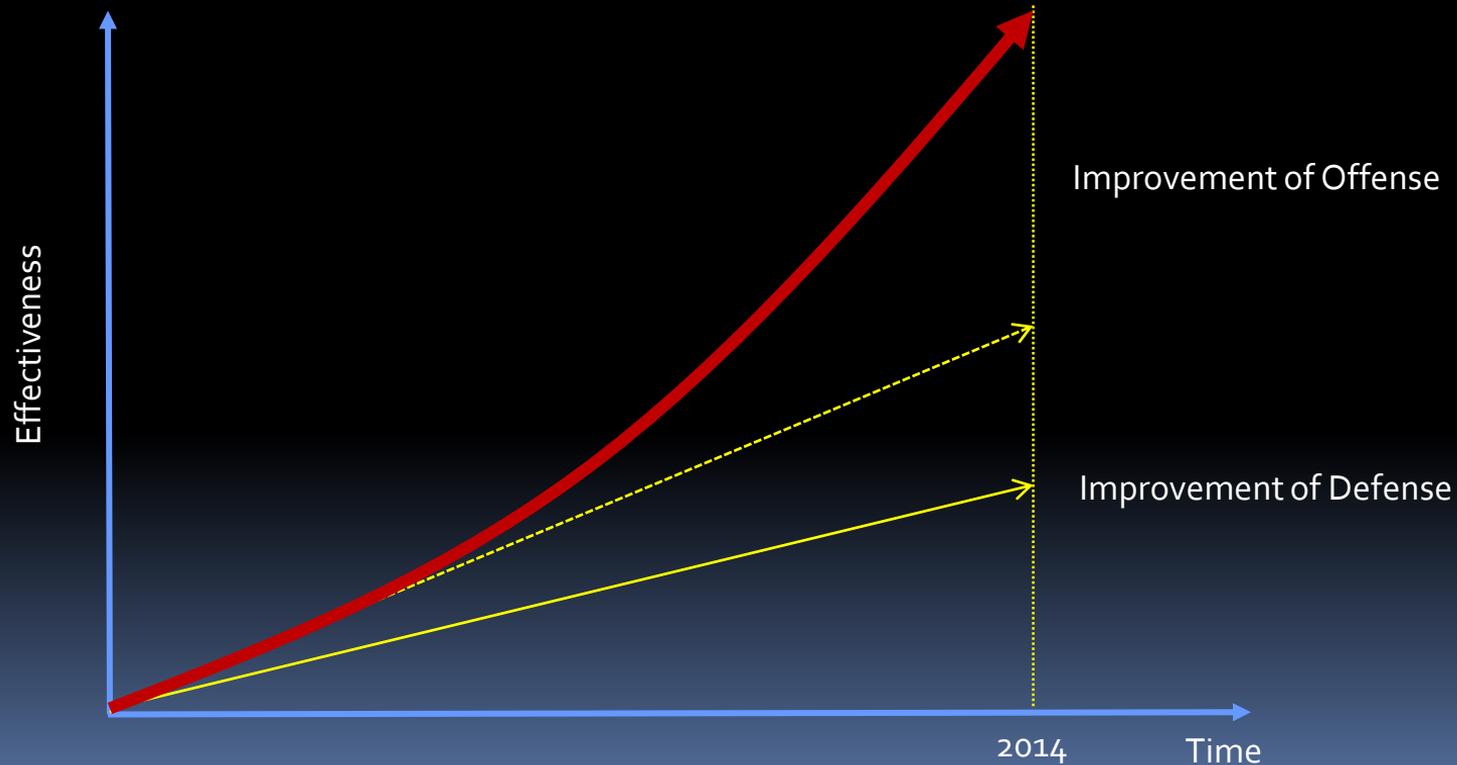
Dan Geer, 2014

"Wild West"

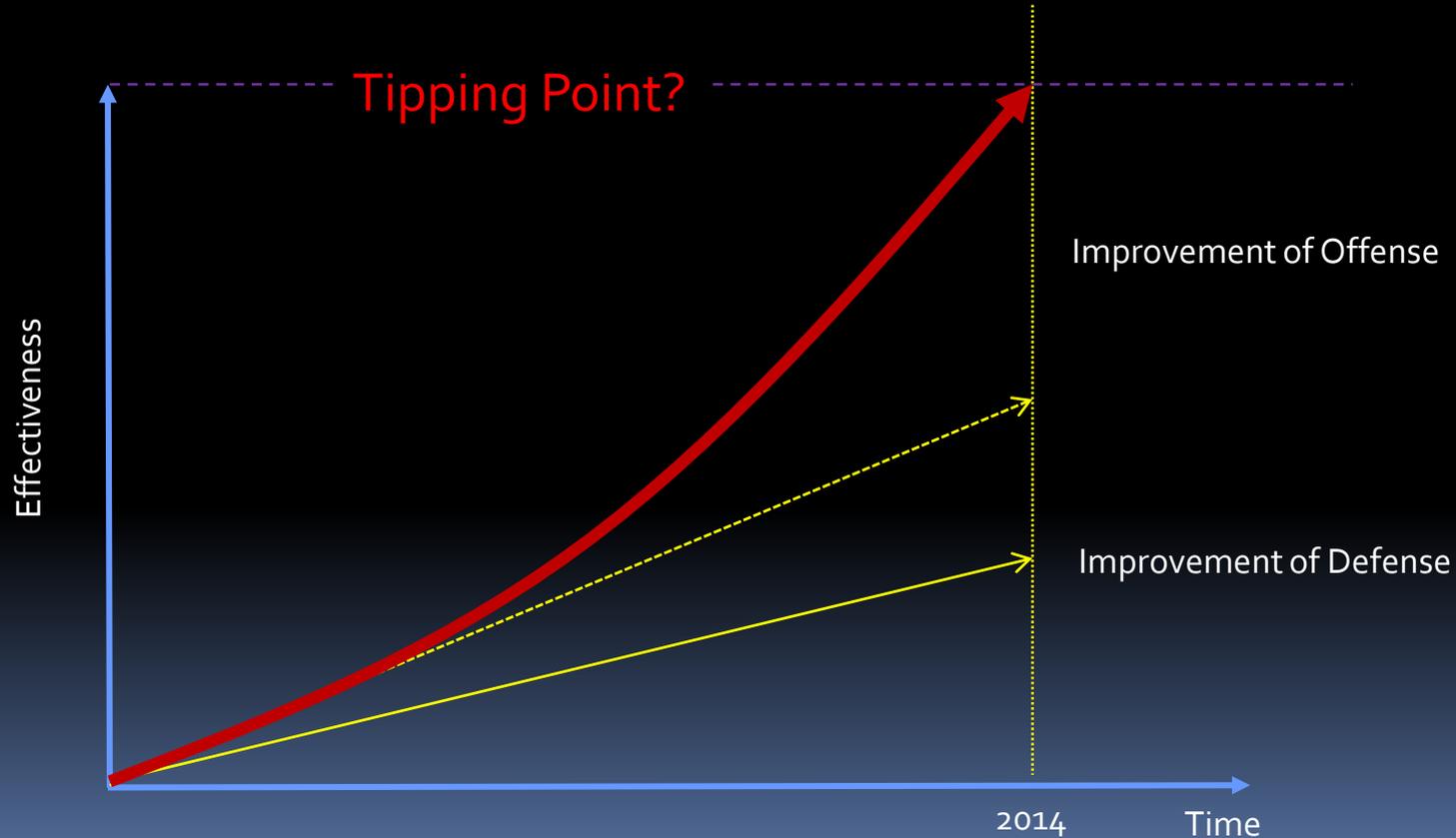




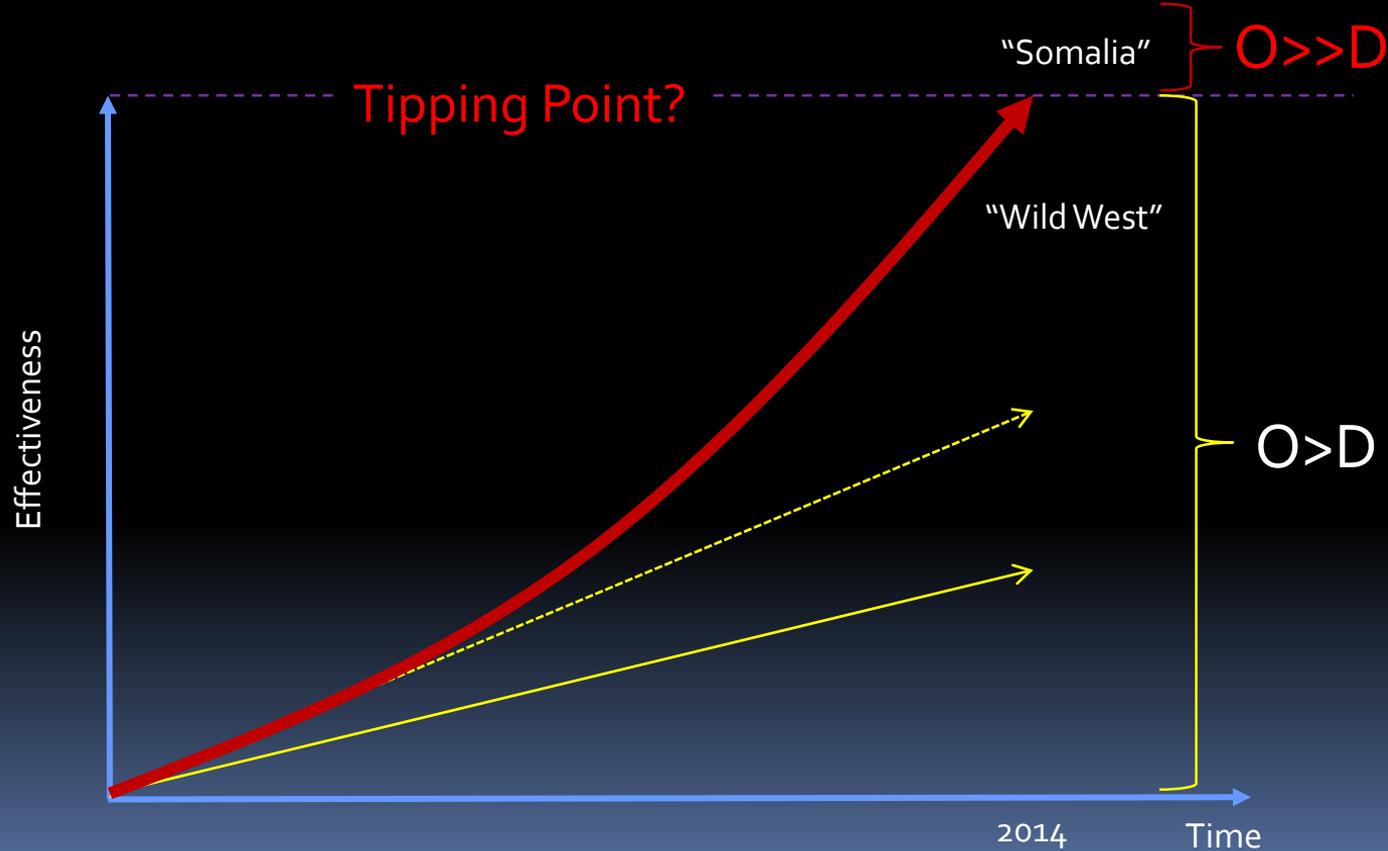
Or Is It Exponentially Worse?



Can This Last Forever?



When Will There Be More Predators Than Prey?





SAVING FOR WHOM?



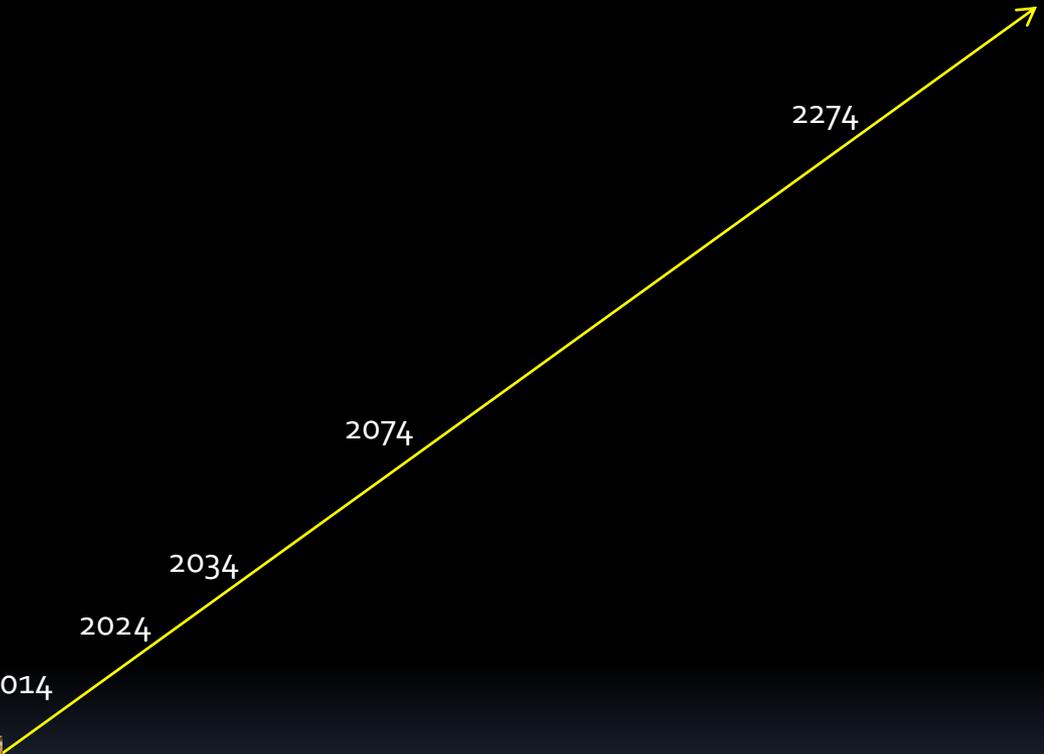
2014

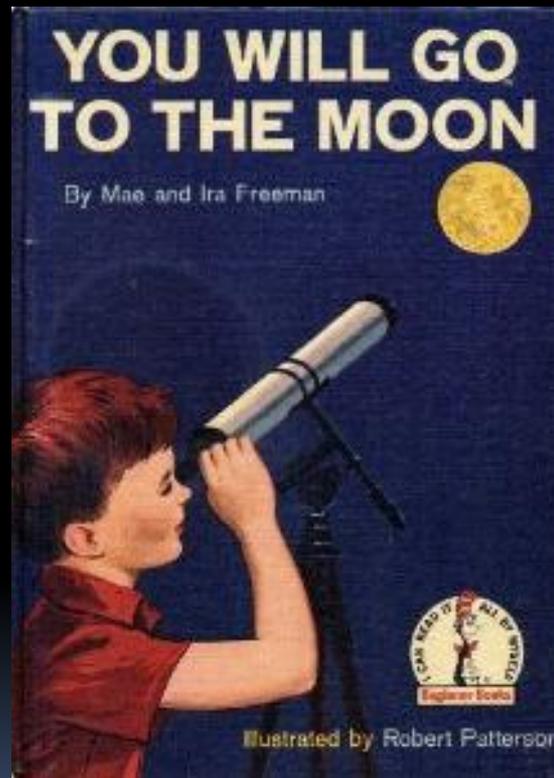
2024

2034

2074

2274







SOLUTIONS

$D > 0$

$D \gg 0$



Solutions

- How *you* can help
 - **Believe:** The DT's quote
 - **Care:** That you can matter
 - **Join:** Give your time, brains and patience
 - **Measure :** To be sure

- Sustainable Internet
 - Private-Sector Centric Approach
- Working at Scale
 - Single US Cyber & Internet Strategy
- Disruptive Defensive Technologies ... but only if they work at scale!



Questions?

Twitter: @Jason_Healey