WHY IS THIS (STILL) SO HARD?

Cyber Security in a Dangerous Time

….but very dangerous!!!

So Here's the Problem

"Digital technologies, commonly referred to as cyber systems, are a security paradox: Even as they grant unprecedented powers, they also make users less secure....cyber systems nourish us, but at the same time they weaken and poison us."

Richard Danzig, Former Sec. of the Navy

HOW DIFFERENT IS THIS?

- Like the European Discovery of the Western Hemisphere???

Americans Think Of It As a "Domain"

- **"Defending a New Domain: The Pentagon's Cyberstrategy"**   *William J. Lynn III*

FOREIGN AFFAIRS

How the Afghan War Can Still Be Won
Michael O'Hanlon

The Pentagon's New Cyberstrategy
William Lynn

KGB 2.0
Andrei Soldatov & Irina Borogan

The Not Ready for Global Prime Time Players
Jorge Castañeda

A Waterless World?
James Nachtwey

Why Further Nuclear Cuts Would Be Safe
Blair, Esin, McKinzie, Yarynich & Zolotarev

Islamists and Nazis
Paul Berman, Jeffrey Herf & Marc Lynch

Remaking the Middle East

New Challenges Call for New Policies. Are the U.S. and Israel Ready to Change Course?

Beyond Moderates and Militants
Robert Malley & Peter Harling

How to Handle Hamas
Daniel Byman

Legitimizing Israel's Bomb
Avner Cohen & Marvin Miller

A U.S.-Iranian-Turkish Alliance?
Mustafa Akyol

U.S. Civil-Military Relations After McChrystal
Matthew Moten

"…As a doctrinal matter, the Pentagon has formally recognized cyberspace as a new domain of warfare. Although cyberspace is a man-made domain, it has become just as critical as land, sea, air and space."
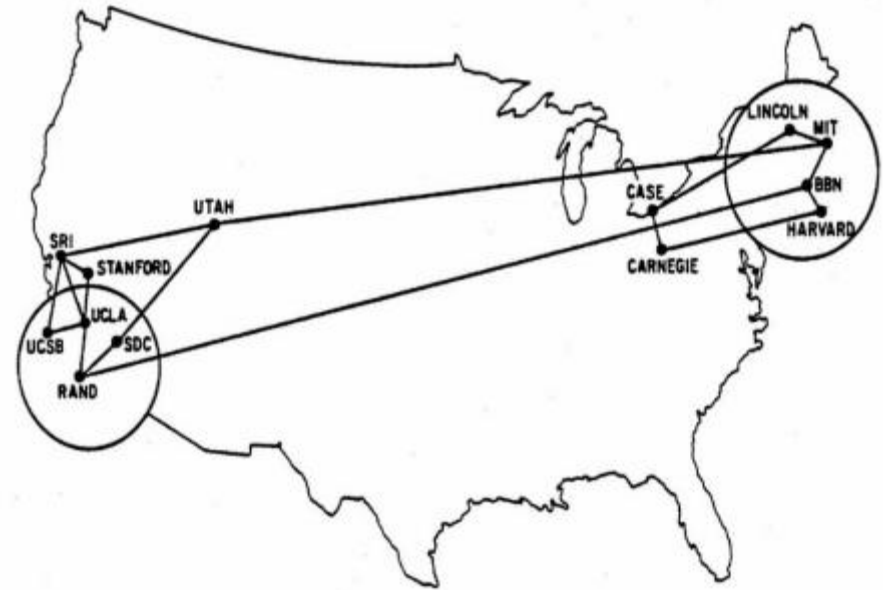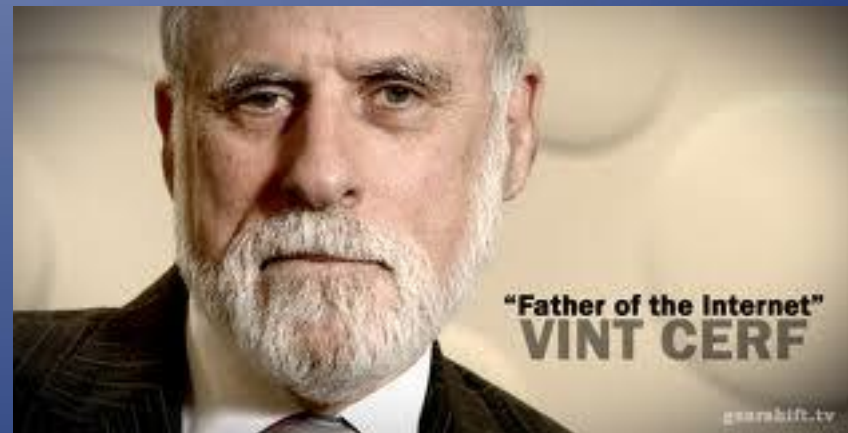
Land, Sea, Air, Space, Cyber

From ARPA Net….

The ARPANET in December 1969

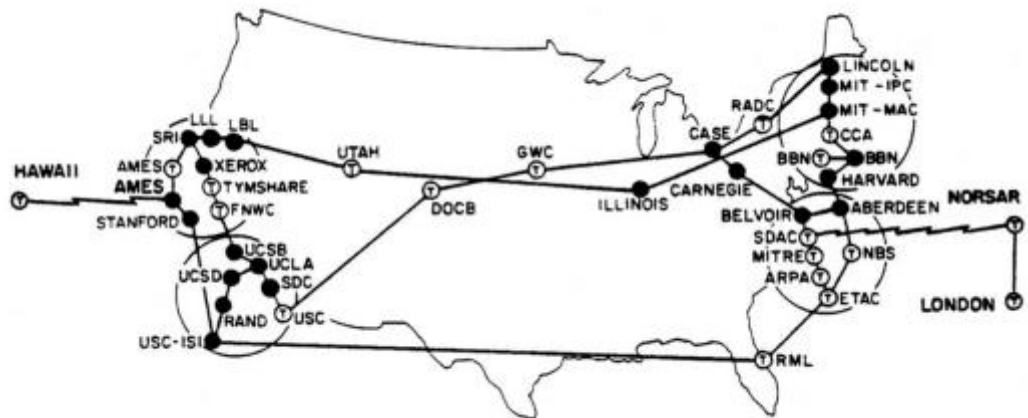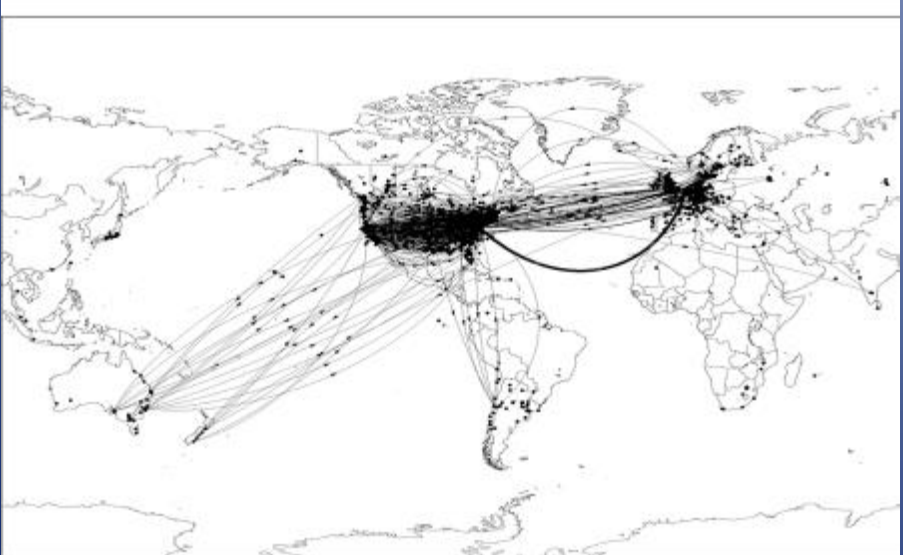1969

1970

"Father of the Internet"
VINT CERF

To Internet

1984

1973

Geographic Map, June 1, 1984

1993

…to the Worldwide Web
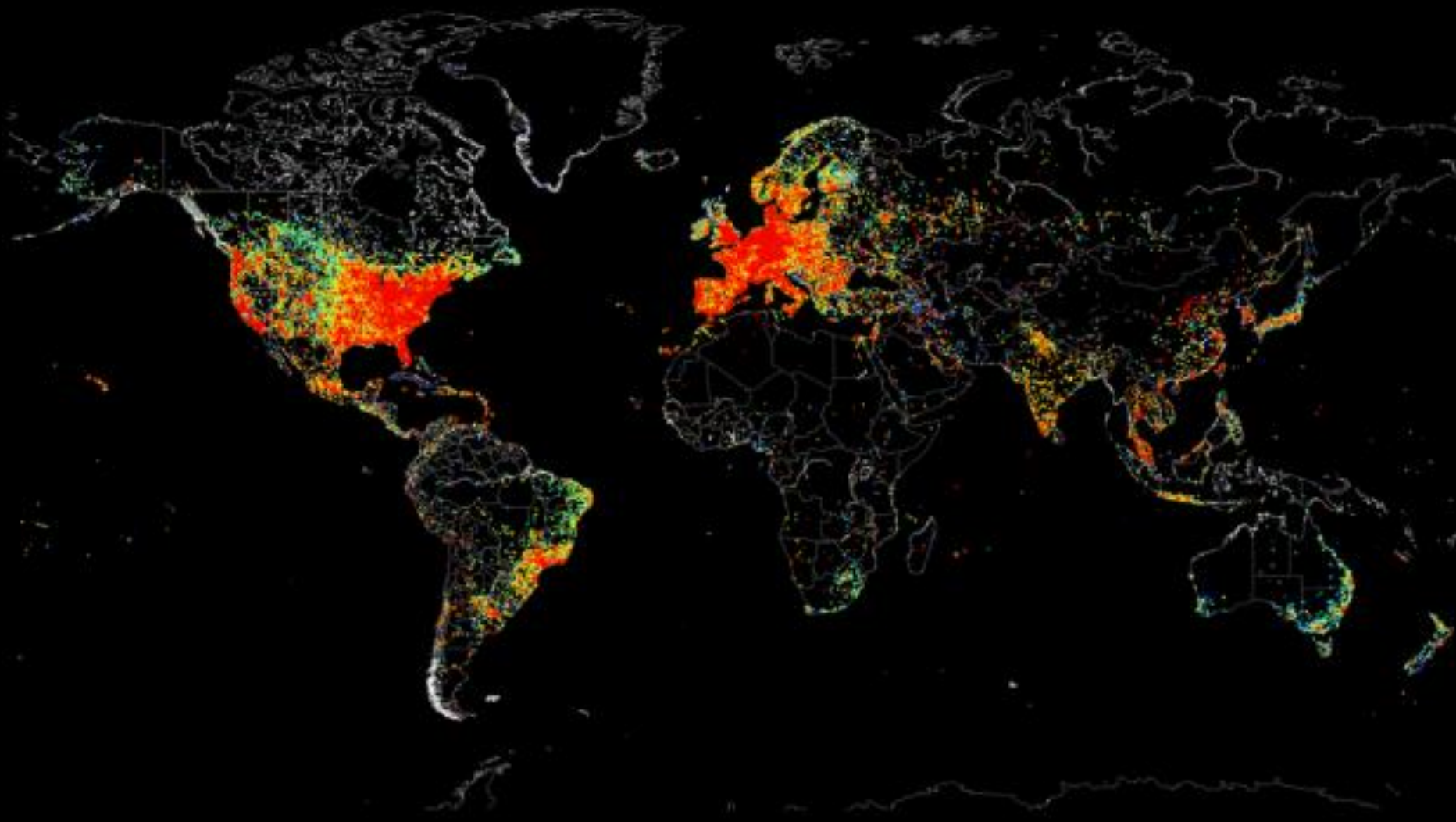
A Map of Everything Connected to the Internet

So…What Could Go Wrong?

- There's stealing your stuff

- There's corrupting your stuff

- There's hurting your network

- There's creating physical destruction

And Who Could Do This?

- Nation States

- Criminal Gangs

- Hacktivists

We've Seen a Lot of This

North Korea Attacks Sony Pictures

Iran Attacks the Sands Casinos

China and the Great Cannon

…and then

WHAT HACKERS CAN FIND
IN AN OPM
PERSONNEL FILE

SOCIAL SECURITY NUMBER

DATE AND PLACE OF BIRTH

BENEFIT SELECTIONS

Bloomberg

Government Has Been Late to Need Since Big Questions Still Remain

Congress to Pass Cyber Security Legislation????

- Privacy

- Information Sharing

- Liability Protection

The President's April Executive Order on Cyber Security

- Declares a national cyber emergency

- Authorizes sanctions on individuals that engage in "significant malicious cyberenabled activities"

- Freezing assets or barring commercial transactions

United States Cyber Strategy

- Routine attacks fended off by private companies
- DHS helps identify and defend against more complex attacks
- 2% of attacks may prompt a national response
  - "…something that threatens significant loss of life, destruction of property or lasting economic damage"

And so, what more can you do???

The Traditional Risk Equation

Risk =

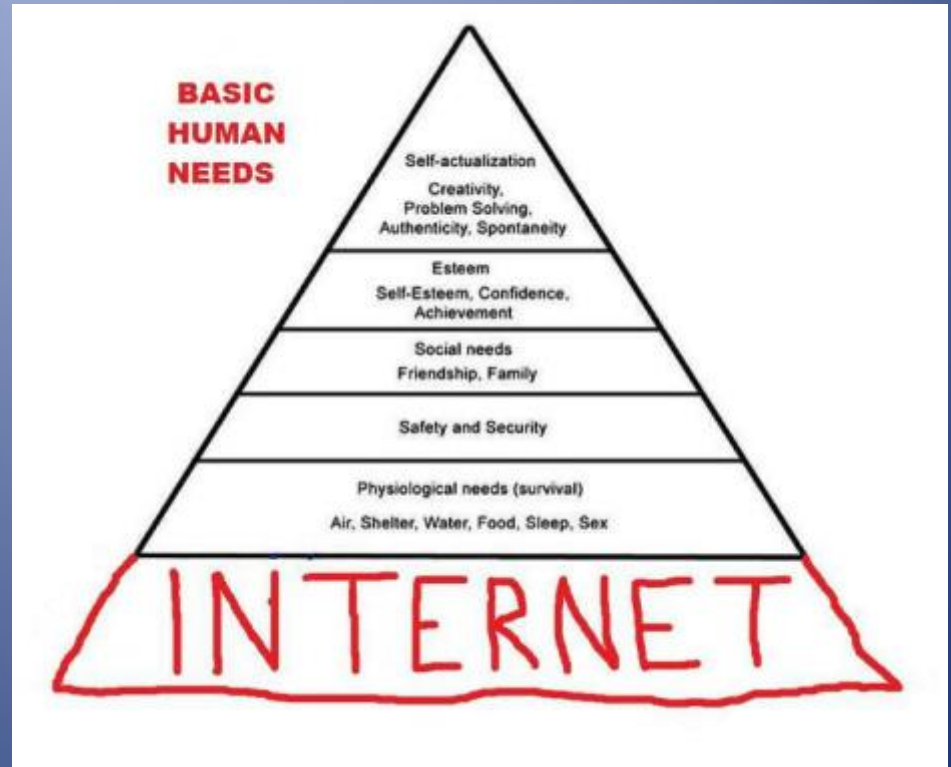### Threat   x   Vulnerability   x   Consequence

The Growing Field of Cyber Insurance

The Challenge

- Cyber security is not just adequate defense, but preserving why we have the internet in the first place.
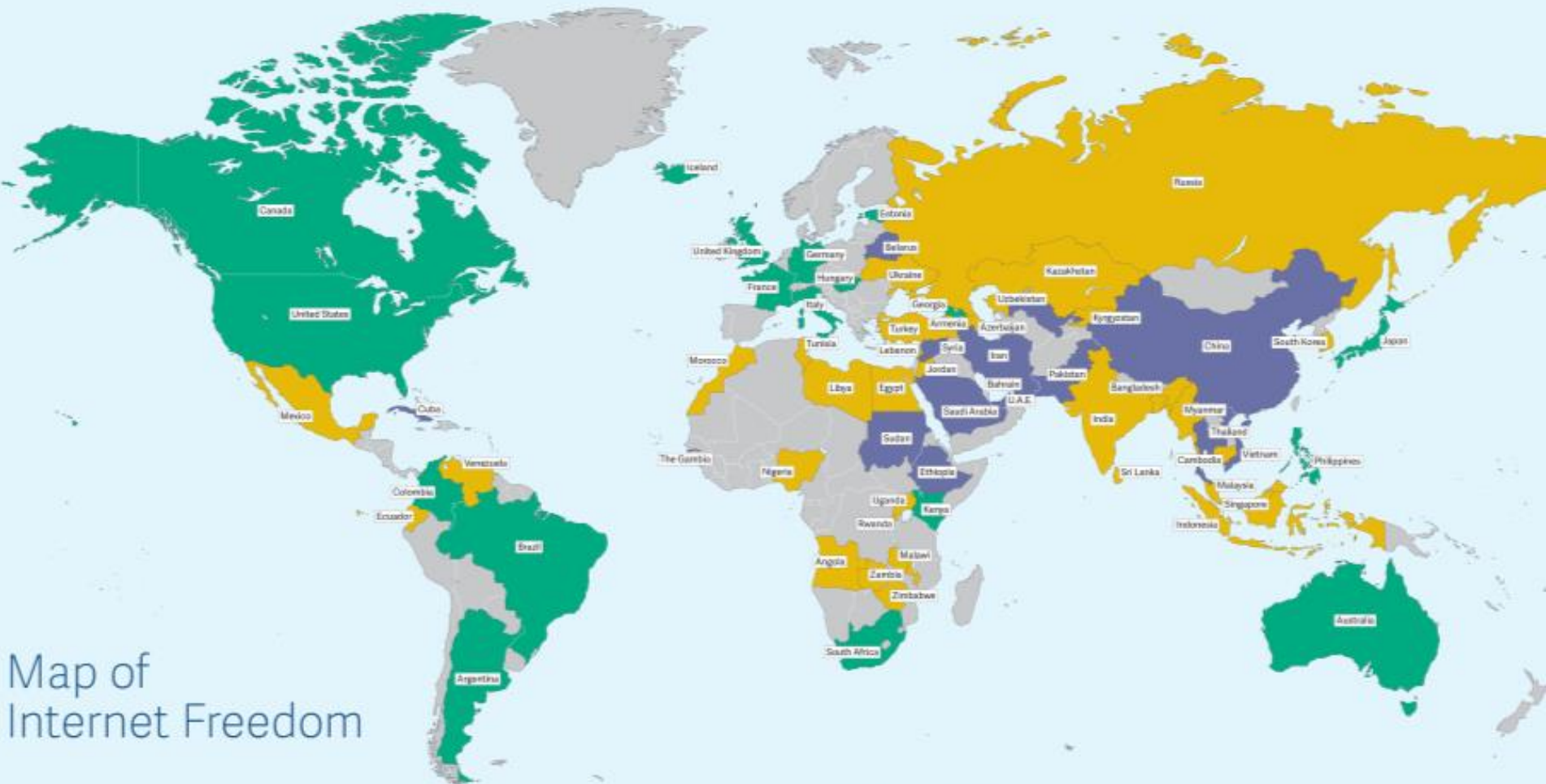
Walter Russell Mead

"Technology is not and has never been socially or politically neutral; it embodies and usually transmits the attitudes, economic endowments, moral priorities, and even the aesthetics of the societies that create it. It is very hard to simply adopt the machine and not the less tangible biases that go with it."

Internet Freedom

Map of Internet Freedom

Status	Count
FREE	19
PARTLY FREE	31
NOT FREE	15
Total	65

Freedom on the Net 2014 assessed 65 countries around the globe. The project is expected to expand to more countries in the future.

FREE · PARTLY FREE · NOT FREE · Country not assessed in 2014

Russian-Chinese Agreement on International Information Security

Agreed to work against "undermining the sovereignty and security of the states, and interference in their internal affairs...destabilization of internal political and social-economic environment..."

What We Do Matters

What we do for security reasons others will follow…for autocratic and mercantilist reasons

Should we treat our industry as American or international??

How long will internet governance be essentially American??

Are international norms possible??