WORKING WELL WITH OTHERS IN TECH POLICY CONTEXTS

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OVERVIEW

ACADEMIES' UNIQUE ADVISORY ROLE

- Non-partisan

- Not advocacy

- Neutral convening and exploratory space

- Careful, objective approach

BROAD PORTFOLIO AT CSTB

- **Guiding the evolution** of computing and communications research programs and stimulating work in **emerging areas**
- Advising on strategic directions and best practices for **research cyberinfrastructure**
- Informing new directions in **computing education**
- Describing **how IT evolves, the role of R&D and the role of different contributors** – public and private – to that process
- Explicating for a broad audience the **workings and implications of key technologies**
- Addressing the **cybersecurity** challenge
- Better application of **IT in the federal government** and for **national and homeland security**
- Addressing complex **public policy issues** related to IT

MECHANISMS

- Consensus studies -> recommendations to Congress, agencies, others

- Roundtables & Forums

- Workshop activities

- Expert meetings, convenings, and agency interactions

- Deep rolodex

- Extensive oversight; demanding peer review
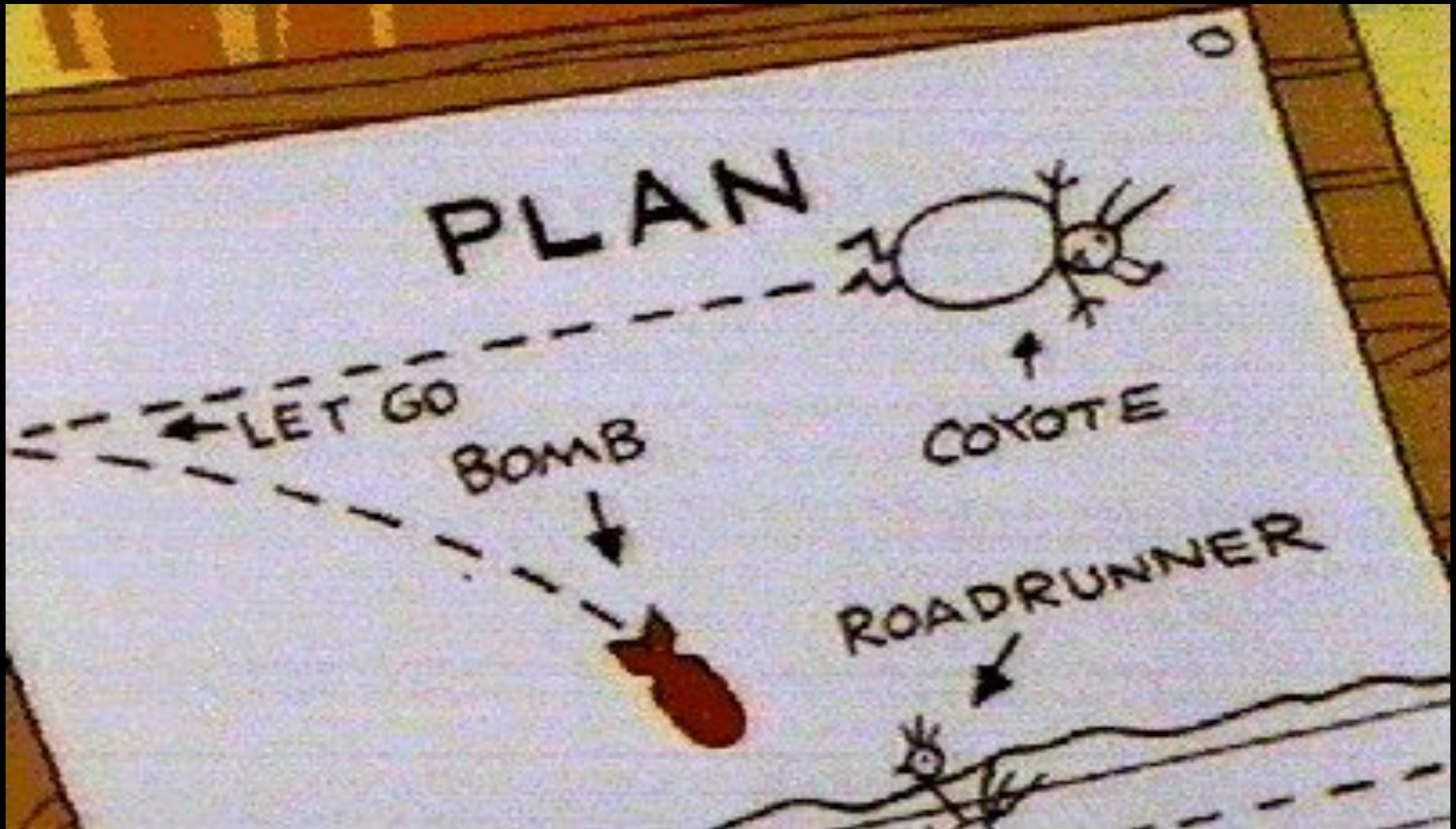
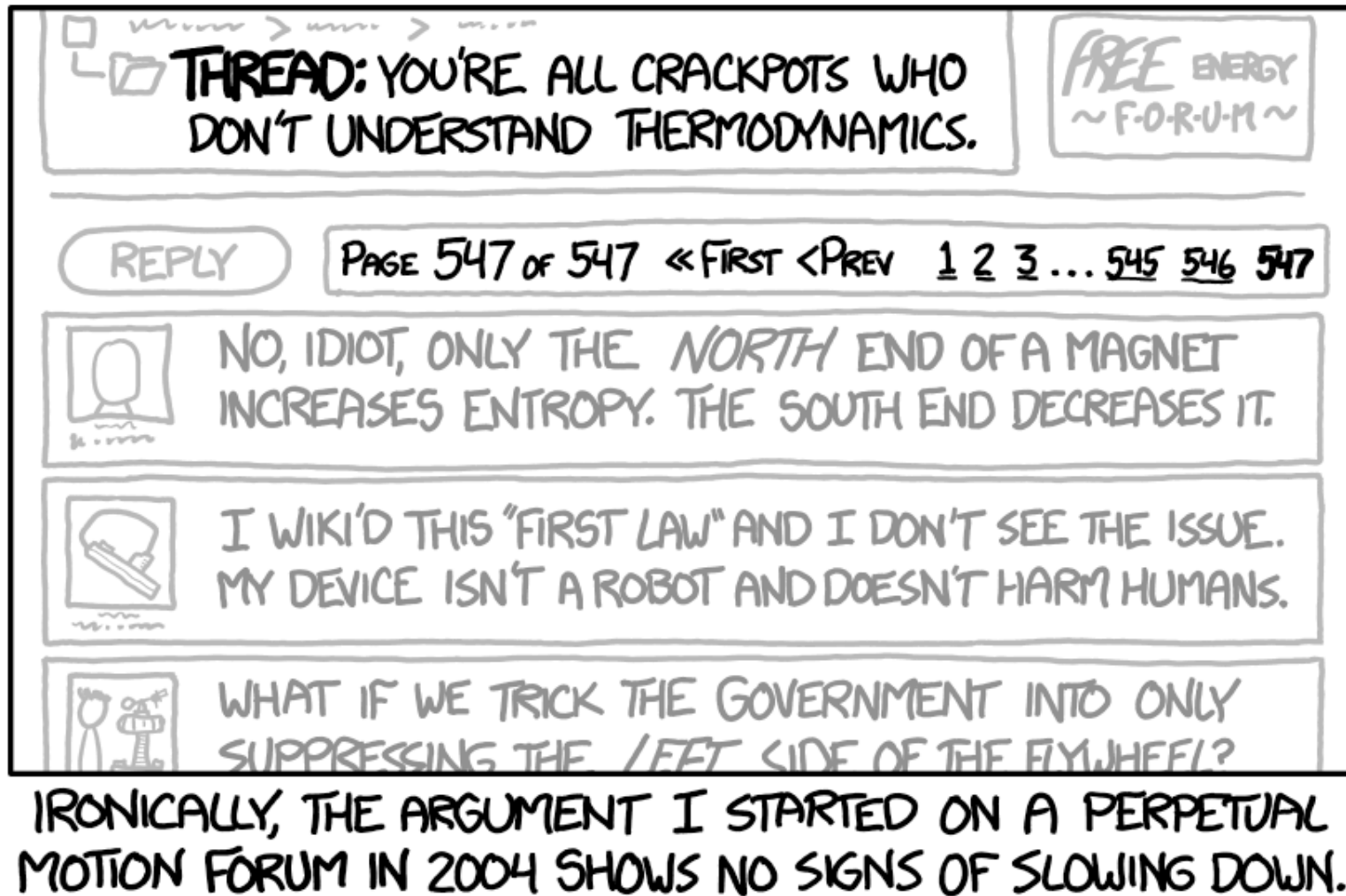- Soft money (no line items)

TO DO:

- Assume good faith

- Be comfortable with uncertainty, intellectual discomfort

- Listen hard

- Filter for vocabulary mismatches

  - Establishing a common vocabulary is hard

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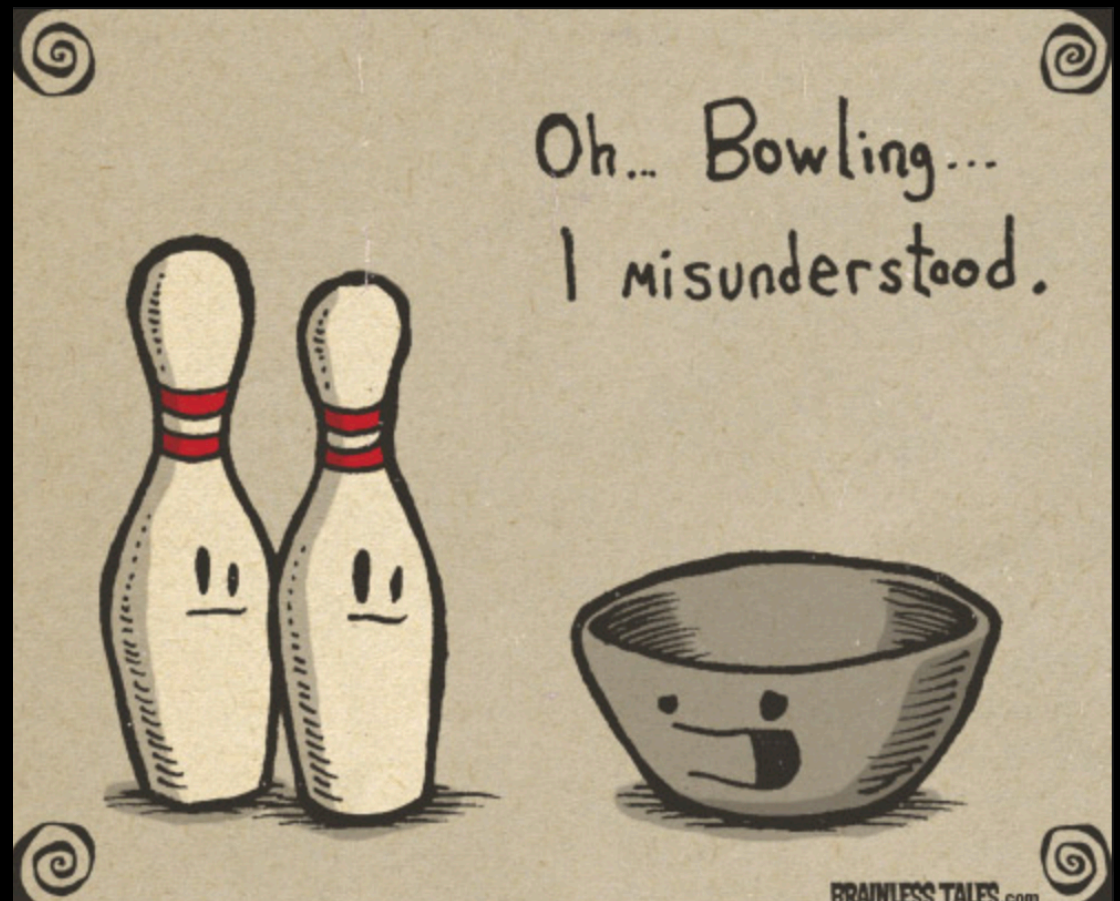
RECOGNIZE DIFFERENT SORTS OF SMARTS

- Distinguish technical and non-technical arguments

- If you disagree, be able to state the counter-argument (type II disagreements)

- Be aware of generational distinctions

  - knowledge, communications, leadership styles

- Be alert to when language obfuscates or elides

  - and when it's meant to

- Be generous w/ideas - open to collaboration

KEEP CALM AND SHARE YOUR IDEAS

FOCUS ON THE GREATER GOOD

- Write - and be willing to be edited

- [Academies specific:] Contribute based on your individual expertise

  - not as a representative of an organization

- Address long-term issues —B. Lampson

- Recognize: you are working on a hard problem

  - If it were straightforward, why ask for expert help?

  - Sources of difficulty are not always (or often?) technical

ANTI-PATTERNS (THINGS NOT TO DO)

- Don't have an agenda; avoid pre-conceived outcomes

- Don't make unsubstantiated assertions

  - even if well-known in your subfield

- Don't forget to check your assumptions

- Don't get lost in **techno-solutionism**

  - Step 1: Apply AI and AR; Step 2: ???
    Step 3: World peace!

- Don't demand credit and recognition
  for your brilliance

- Don't ignore constraints of federal context (resources, rules, processes)

  - "…why don't they just…"

- Don't engage in special pleading for 'more research dollars' for your field

Common Sense, there's no App for that!
someecards user card
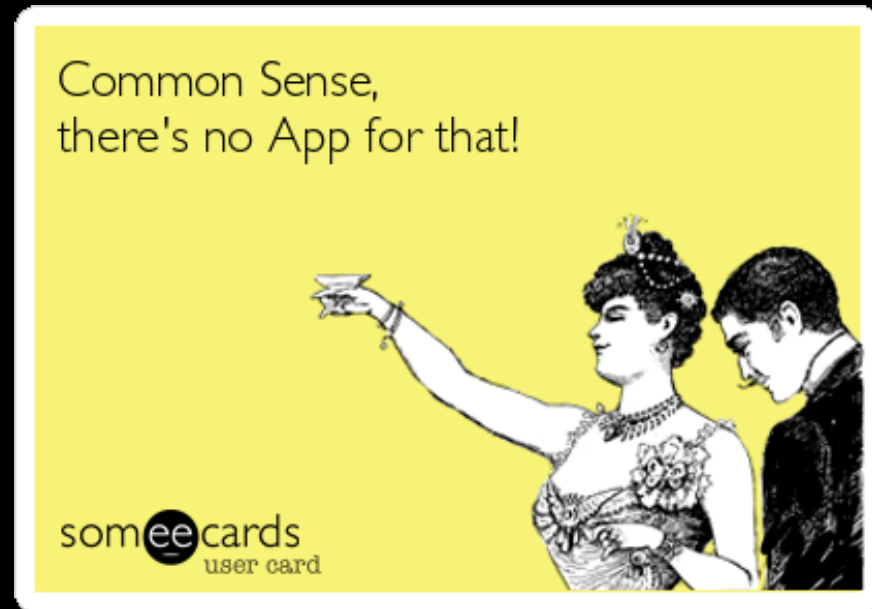
NATURE OF THE WORK

- Sausage making

- Congressional and agency staff inputs & audience

- Questions not always well-posed

- Good data is often scarce

- Stakeholders are varied, include 'the public'

SOLVING A PROBLEM ONCE IS NEVER SUFFICIENT

- Isomorphic problems arise

  - need to be addressed, put in language of new domains

- New cohorts of policymakers - constant churn

- Environment and polity change over time

  - What worked in the 90s or post-9/11 might not make sense today

  - But do listen to the 'old hands'

- You will need to repeat yourself

  - Cannot expect Congress, policymakers to have read the literature

- Bias toward the 'new'
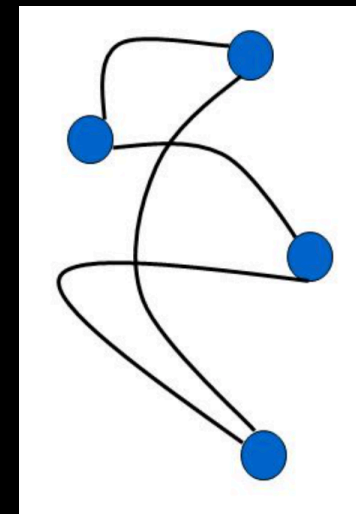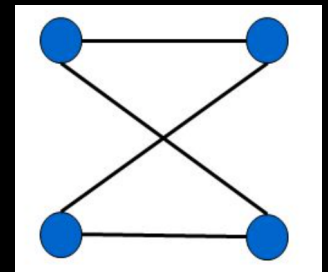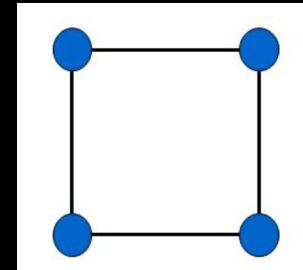
ILLUSTRATING THE IMPACTS OF IT RESEARCH AND THE GOVERNMENT-UNIVERSITY-INDUSTRY INNOVATION PARTNERSHIP

IT Sectors With Large Economic Impact

Broadband & Mobile | Microprocessors | Personal Computing | Internet & Web | Cloud Computing | Enterprise Systems | Entertainment & Design | Robotics & Assistive Technologies

Motorola — AMD Intel — eBay Akamai Yahoo! — IBM — Electronic Arts — Nuance
— Qualcomm — HP Symantec Juniper Facebook Twitter VMware HP Adobe Autodesk
— Texas Instruments — Microsoft XBox
— nVidia — Apple — Cisco — Amazon — Oracle nVidia Pixar iRobot
iPhone — Dell — Google — iPod Intuitive Surgical

Areas of Fundamental Research in IT:
Digital Communications | Computer Architecture | Software Technologies | Networking | Parallel & Distributed Systems | Databases | Computer Graphics | AI & Robotics

Legend: University | Industry R&D | Products | $1 Billion Market | $10 Billion Market

FINALLY …

- For the **public**: do some good (or stop some harm)

  - national security, public health, climate crisis, critical infrastructure, …

- For **your field**: Ideas, methods, results can have impact and influence on national-scale challenges

- For **yourself**: broadening and eye-opening learning opportunity, possible new collaborations, research trajectories

  - Take it!

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"The inexorable expansion of science and technology feeds on itself ... there are countless opportunities to apply new science and engineering methods, no matter who leads government."

- MARJORY BLUMENTHAL

FOUNDING DIRECTOR OF CSTB; FORMER EXECUTIVE DIRECTOR, PCAST; DIRECTOR S&T POLICY, RAND

http://insights.globalspec.com/article/3992/technology-and-engineering-under-president-trump