On Measurement and Experimental Norms

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“Show a little faith, there’s magic in the night
.........”
State of the World

• Old World: The Internet was a research playground

• Current World: The Internet is crucial infrastructure

• Much non-technical tussle
Implications

• Impacting many communities
  • users, operators, policy makers, researchers

• Many important implications
  • technical, practical, legal, ethical
Problems

- Internet research is difficult ...
  - need hefty machine to capture data
  - logs contain sensitive information
  - deployment issues with experimental apps
  - vantage point can cloud insight
  - probe traffic may look like an attack
  - conservative management might just say “no”
  - monitoring might be illegal
  - constant vigilance required to collect good data
  - etc., etc., etc.
Coping ...

- Who needs the Internet?

- Testbeds
  - E.g., DETER, EmuLab, the 10 noder in your lab

- Overlays
  - E.g., PlanetLab, RON

- Simulators
  - E.g., ns-[23]
Coping ... (cont.)

• Biggest problem:
  • Our coping strategies are not the Internet

• So, we have to cope some more ....
  • Characterize and model the Internet to bring realism to our modeled worlds

• This brings us back to working within the bounds of the Internet
“What Ought I To Do?”

- How do we deal with today’s Internet environment in an *ethical* way?
Five Acts

• How much active probing is reasonable?
• How to handle shared resources?
• How to treat shared data?
• How to protect users?
• How to protect institutional or commercial privacy?
Active Probing


• How much is too much?

• What constitutes an attack?
Shared Resources

Shared Data


User Privacy

• If we agree on anything in this space, it is generally that we must respect user privacy

• In my conversations, this is uniformly believed

• But, what does it mean?
User Privacy (cont.)

Institutional Privacy

• What is the role of an IRB?

• What is the role of a PC?

• Do we need a set of community norms that we can reference and use for guidance?
Questions? Comments?

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