Workshop on the Economics of Securing the Information Infrastructure  
(WESII 2009)

University of California Berkeley - School of Information  
110 South Hall

March 5, 2009

Agenda

March 5th
8:30 – 9:00 am  Continental Breakfast
9:00 - 9:30 am  Introductions
9:30- 11:00 am  Session 1: Scott Shenker, Stefan Savage, Susan Landau, Daniel Weitzner

Identity: how deeply and thoroughly to embed identity in the network?

There are multiple proposals to embed identity information into the network architecture. These proposals vary with respect to where to embed it, whether to place semantics for identity attestations within the network or at the endpoints, and relatedly the amount of standardization the network itself should drive. This conversation will consider the security, economic and law and policy implications of a range of options in this space.

11:00 - 11:15 am  Break
11:15- 12:45 pm  Session 2: Dave Clark, John Chuang, Paul Laskowski

User control over ip transport: user defined network routing.

There are competing proposals to support user defined network routing. The vary with respect to how well they would support and scale to end users verses intermediary control over routing, the extent to which they facilitate feedback about the effect (including but not limited to performance) of chosen routes, as well as techniques. This conversation will examine the security, economic, law and policy implications of alternatives to user defined ip routing.

12:45- 2:15 pm  Lunch and Design Exercise:

Design of the smart power grid.

President Obama has called for the creation of a smart power grid. The smart power grid will require radical transformations of the current electrical grid, building in the capacity for distributing intelligence and communication capacity throughout. Through the introduction of real-time information about energy demand and consumption, and pricing, utility providers should be able to reduce blackouts and foresee and manage other stress on the network, while consumers armed with smart meters and smart appliances should be able to reduce consumption and load shift to reduce cost and overload. There are
multiple questions about the security, economic and privacy impacts of this new architecture, and a chance to influence its design. Our lunch exercise is to come up with a list of design requirements that would best support the President's aims "save us money, protect our power sources from blackout or attack, and deliver clean, alternative forms of energy."

2:15-2:30 pm  **Break**

2:30-4:00 pm  **Session 3: Brett Frischmann, Aaron Burstein, Neil Gandal**

Network neutrality: various laws have been proposed to promote "network neutrality" -- the proposition that network providers may not block, degrade, or otherwise discriminate against applications or content sources flowing over their networks. This session will explore the security, economic and architectural implications of various proposals to promote "network neutrality" particularly in relation to potential future architectures that could include the architectural changes discussed in sessions 1 and 2.

4:00-4:30 pm  **Break**

4:30-5:30 pm  **Closing Session**

Reserve Topic -- If we have time we may attempt to fit in this additional discussion or if folks feel strongly, swap it with session 3, or otherwise figure out how to cover it as well.

Finding an economic basis to mitigate bot-nets

Botnets and the resulting mischief (which include DDoS attacks, volumes of spam and click-fraud) are in economic terms an illustration of mis-aligned incentives. The machine infested with the malware may be doing mischief, but the owner may not be greatly inconvenienced--a classic example of a negative network externality. The ISP that hosts the infested host may well be able to detect the inappropriate behavior, but is not well-motivated to intervene. If the ISP disconnects the machine, the user will just call the ISP's help desk, costing the ISP money. Can we find a way to adjust the incentives of the various actors? (We will propose one such scheme to stimulate people's imagination.)