The Economics of Cybersecurity: Homework 1

Due: January 23 at 5:00pm

Submission Guidelines: Please submit your work on Courseworks. Cite any sources used.

Part 1 (10 points)

1. Choose a security problem that you are interested in. Add your name and chosen topic to the spreadsheet here. You may draw from the provided list of suggested topics in the spreadsheet if you do not have a particular topic of interest. Please pick a topic that is different from the other students in the class.
2. Create a system-level diagram of the problem as demonstrated in class. Be prepared to present your work at the beginning of next class.

Notes:

- This assignment may involve some amount of personal research on your chosen topic. Please cite any sources used.
- Systems are not processes! A process can be thought of as a path *through* a system. The implication here is that there should be no element of ordering or time involved in your systems diagram.
- You may find it useful to pick some quantity central to your chosen topic and work outwards from there.
- Use as much or as little space and complexity as you think you need to capture your chosen problem. Please note that more is not necessarily better—the process of distilling a problem down to its most basic form can be very insightful. Keep in mind the following: *"Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away."* — Antoine de Saint-Exupry

Part 2 (5 points)

Read the following two papers:

- Why information security is hard - an economic perspective
- The Economics of Information Security

The second paper is very similar to the first but contains some additional examples worth knowing. Come to next class prepared to discuss the papers.

Please also answer the following question:

1. Are any of the issues described in the above papers (information asymmetry, monopolies, misaligned incentives, et cetera) present in the system diagram you created in Part 1? If so, how? If not, why not? Please give your justification.