CYBER SECURITY-PRIVACY
CAN YOU PROTECT YOURSELF IN CYBERSPACE?
REALLY????

Dr. Levent Ertaul, CSU EASTBAY
WHO WANTS THE LIVE IN A GLASS HOUSE?
WHO WANTS THE LIVE IN THIS FUTURE?
CYBER SPACE
CYBER SPACE: A Dangerous Place?
CYBER SPACE: USA’s Infrastructure-Partial
SCOPE OF CYBER SPACE
VULNARABILITIES OF CYBER SPACE:
Instantaneous Action at a Distance
VULNARABILITES OF CYBER SPACE:
Asymmetries of Cyber Space
VULNARABILITES OF CYBER SPACE: Anonymity

"On the Internet, nobody knows you're a dog."
VULNARABILITIES OF CYBER SPACE:
Lack of Borders
VULNARABILITES OF CYBER SPACE: Difficulty of Distinction
PRIVACY: Who is after your private Data

GOVERNMENT

“Every time you pick up the phone, dial a number, write an email, make a purchase, travel on the bus carrying a cell phone, swipe a card somewhere, you leave a trace and the government has decided that it’s a good idea to collect it all, everything, even if you’ve never been suspected of any crime.”
PRIVACY: Who is after your private Data

CORPORATIONS

WE COOPERATE WITH CORPORATE SURVEILLANCE BECAUSE IT PROMISES US CONVENIENCE, AND WE SUBMIT TO GOVERNMENT SURVAILANCE BECAUSE IT PROMISES US PROTECTION.
PRIVACY: HOW CAN YOU PROTECT YOURSELF

HDD ENCRYPTION - Bit Locker, PGP
PRIVACY: HOW CAN YOU PROTECT YOURSELF

FILE ENCRYPTION- EFS, FILEVAULT (MAC)
PRIVACY: HOW CAN YOU PROTECT YOURSELF

SECURE E-MAIL: S-MIME, PGP, MAILVELOPE, GMAIL-STAKE

Is your email secure?
PRIVACY: HOW CAN YOU PROTECT YOURSELF
ANTIVIRUS-MALWARE-SPYWARE-FIREWALLS
PRIVACY: HOW CAN YOU PROTECT YOURSELF
PASSWORD MANAGEMENT - LastPass - Keeper
PRIVACY: HOW CAN YOU PROTECT YOURSELF
DELETING DATA - ERASER
PRIVACY: HOW CAN YOU PROTECT YOURSELF
SECURE CLOUD STORAGE- SPIDEROAK
PRIVACY: HOW CAN YOU PROTECT YOURSELF
SECURE PRIVATE BROWSING - TOR
PRIVACY: HOW CAN YOU PROTECT YOURSELF
SECURE PRIVATE SEARCH ENGINE - DUCK DUCK GO
PRIVACY: HOW CAN YOU PROTECT YOURSELF
SECURE WIRELESS CONNECTION - WPA2
THE CONSTITUTION AND CYBERSPACE
FOURTH AMENDMENT

The Fourth Amendment of the U.S. Constitution provides, "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

The ultimate goal of this provision is to protect people’s right to privacy and freedom from arbitrary governmental intrusions.

The protection under the Fourth Amendment can be waived if one voluntarily consents to or does not object to evidence collected during a warrantless search or seizure.

Private intrusions not acting in the color of governmental authority are exempted from the Fourth Amendment.
DATA COLLECTED BY APPS: EXAMPLE

- Take pictures and videos
- Record audio
- Location information (Approximate, Precise)
- Read your Web bookmarks and history
- Modify or delete contents of your SD card
- Control NFC
- Add or remove accounts
- Change your audio settings
- Read sync settings
- Install shortcuts
- Access Mobile Device Management (MDM) content providers
“I AM REGULARLY ASKED WHAT THE AVERAGE INTERNET USER CAN DO TO ENSURE HIS SECURITY. MY FIRST ANSWER IS USUALLY ‘NOTHING; YOU’RE SCREWED’.”

BRUCE SCHNEIER