Cybersecurity and Privacy

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Do you recognize this man?

Photo from http://culturadigitalbau.wikispaces.com/
file/view/thompson.c1997.102634882.lg.jpg/212982274/thompson.c1997.102634882.lg.jpg

Ken Thompson

Co-Creator of
UNIX and C

NAE Inductee: 1980

Turing Award: 1983

Ken Thompson
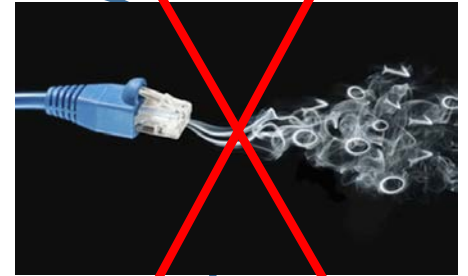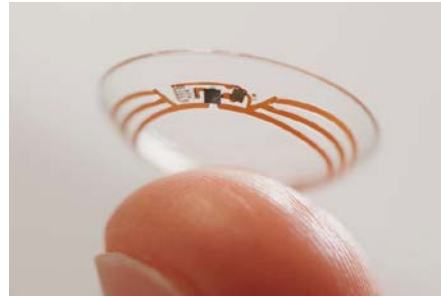
Co-Creator of
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And backdoored UNIX

How to engineer secure and privacy-respectful systems?

We know how to engineer highly secure systems.

1. Rigorously define an adversary model
2. Formally state the security property
3. Mathematically prove safe

Engineering enough security within constraints is the hard part:
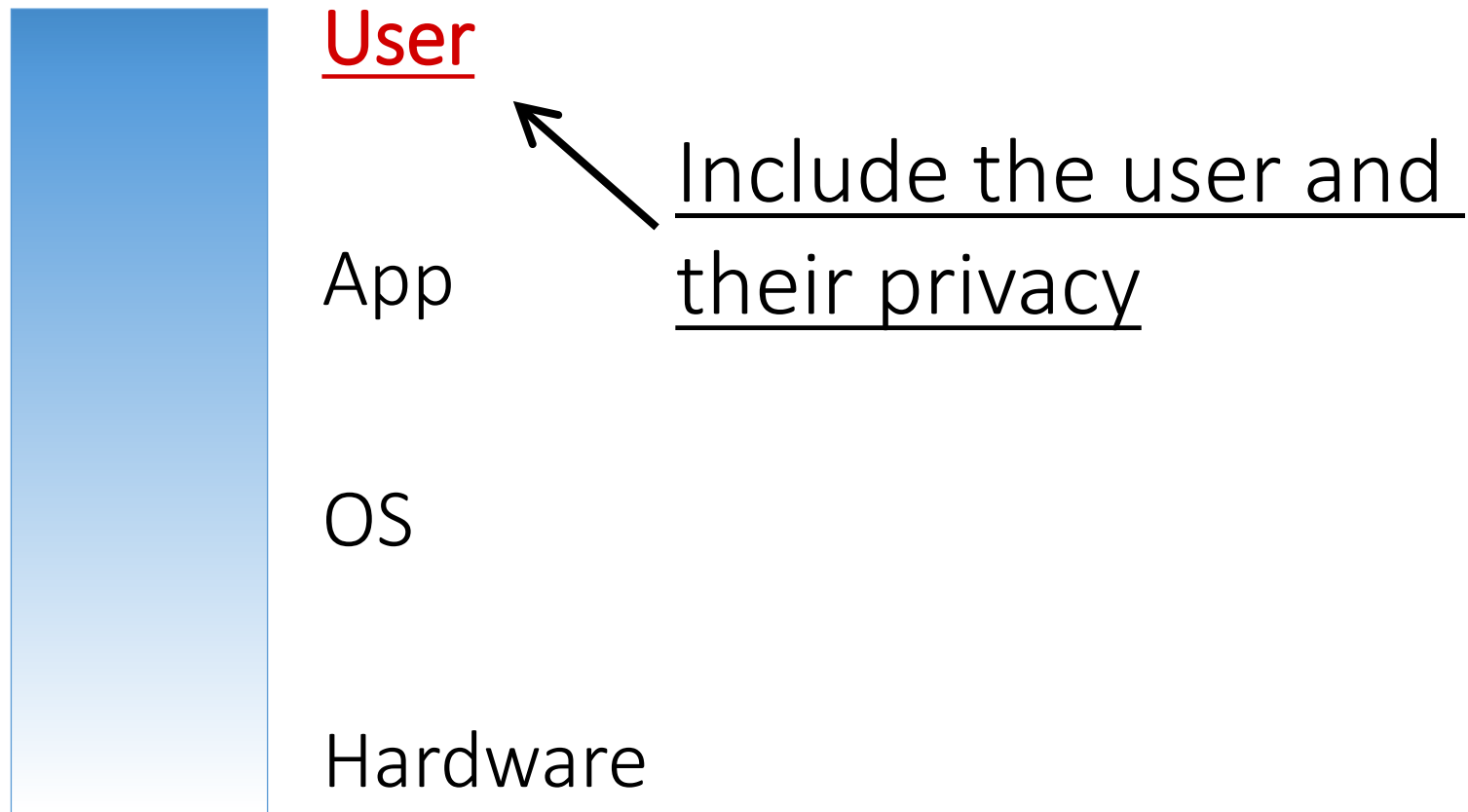
1. Performance
2. Time
3. Money

Talk 1: Bryan Payne, Netflix
Security at Different Layers of Abstractions:
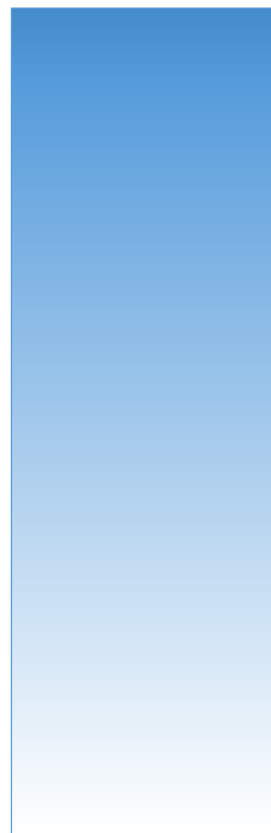Application, Operating Systems, and Hardware

App

OS

Hardware

Defining the system and
security requirements
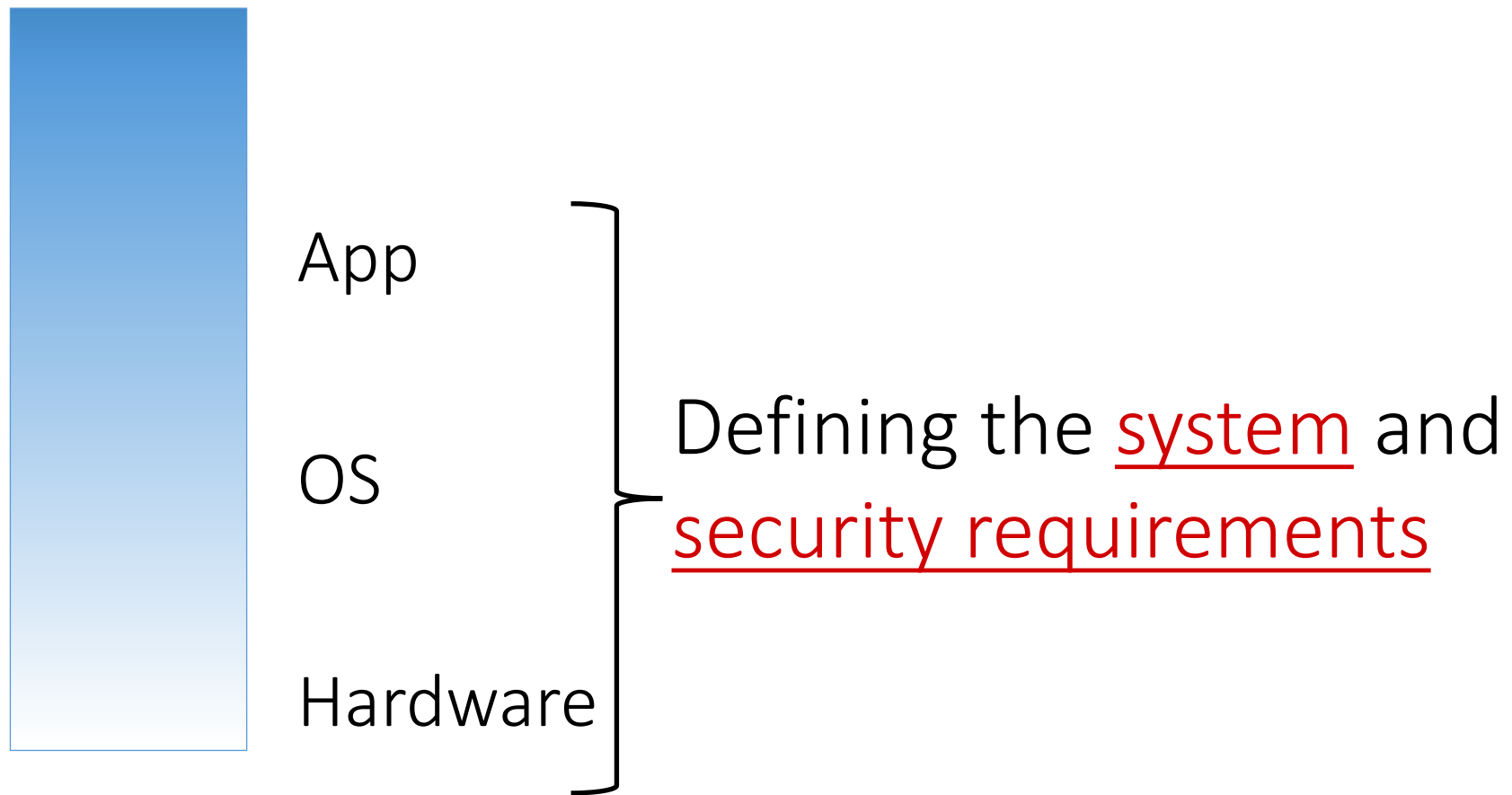
Talk 2: Franziska Roesner, UW
Computer Security and Privacy Where Human Factors Meet Engineering

User

Include the user and their privacy

App

OS

Hardware

Talk 3: Kevin Fu, Univ. of Michigan
Interdisciplinary Security: Medical Devices

User

App

OS

Hardware

Implantable Defibrillator

Talk 4: Tomas Vagoun, NITRD
Challenges of Engineering Cybersecurity:
A Government Perspective

OS

What is the government betting
your tax money on?

End