# INFO/CS 4302
# Web Information Systems

FT 2012

Week 6: Internet Surveillance

(Lecture 11)

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# Surveillance

# Surveillance
## Dictionary Definitions

- (noun) close observation or supervision maintained over a person, group, etc, esp one in custody or under suspicion [Collins Dictionary]

- (noun) close observation, especially of a suspected spy or criminal:
  - *he found himself put under surveillance by British military intelligence*                    [Oxford Dictionary]

- Surveillance describes the close observation of someone, often in order to catch them in wrongdoing. (noun) [http://www.yourdictionary.com/surveillance]

# Readings

How does each of the readings relate to 'internet surveillance'?

- Hal Roberts and John Palfrey. The EU Data Retention Directive in an Era of Internet Surveillance. (2011)
- Alissa Cooper. Doing the DPI Dance - Assessing the Privacy Impact of Deep Packet Inspection (2011)
- Fuchs, C. New Media, Web 2.0 and Surveillance. (2011)

# Roberts & Palfrey
## EU Data Retention Directive

- Analytic Framework?

- Central ideas?

# Roberts & Palfrey
## EU Data Retention Directive

- Categories of surveillance: network, server-side, client-side

- ...

# Roberts & Palfrey
## EU Data Retention Directive

- Categories of surveillance: network, server-side, client-side

- Actual and potential data monitored

- Networks of trust

# Roberts & Palfrey
## EU Data Retention Directive

- Example Application of Framework?

# Cooper

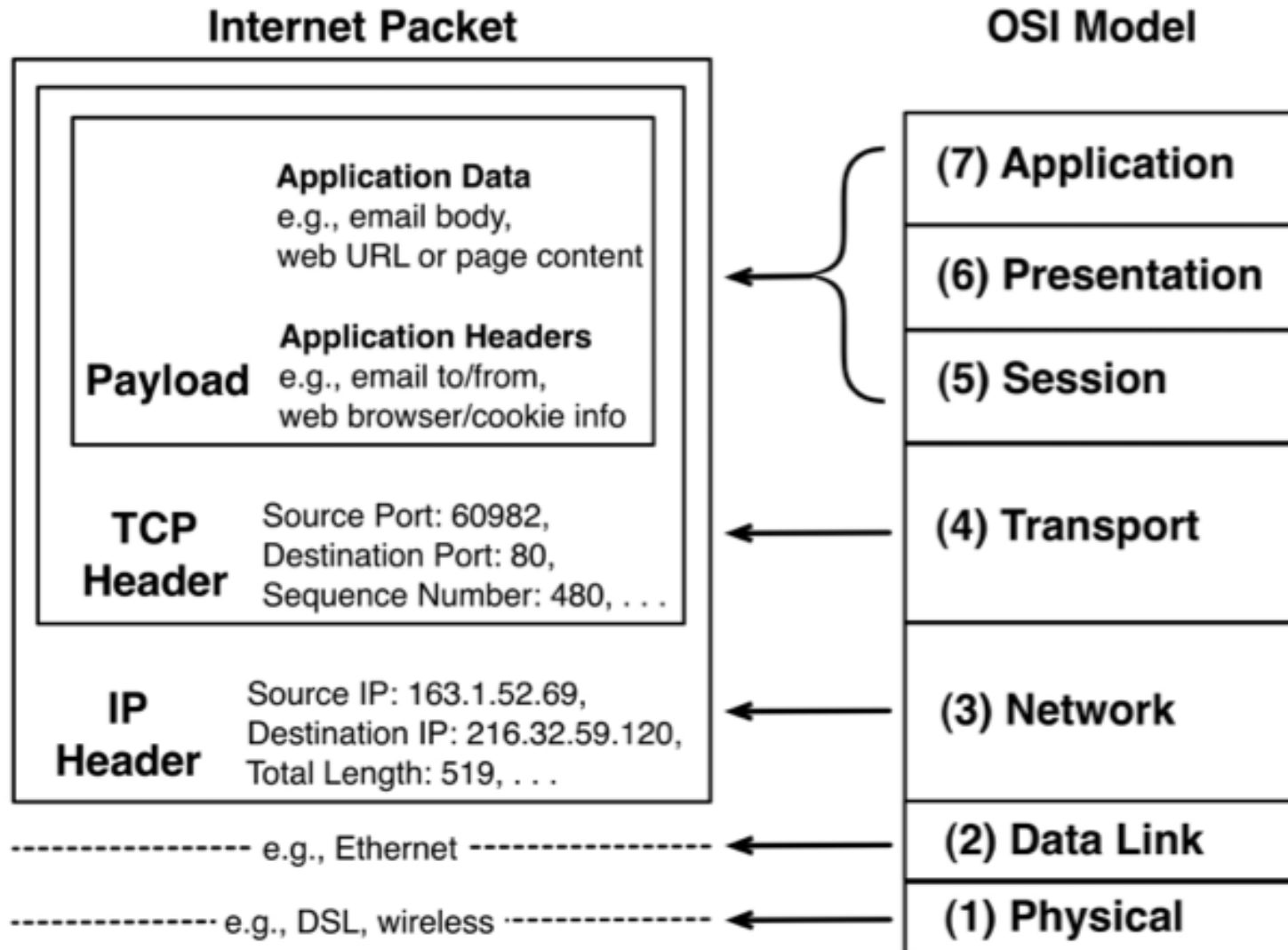Deep Package Inspection (DPI)

# How deep is deep?



Figure 5.1. Mapping between Internet packets and OSI layers (layers 3 to 7 are of interest for defining DPI).

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## Deep Package Inspection (DPI)

- Analytic Framework?

- Central Ideas?

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Deep Package Inspection (DPI)

- Differentiation of privacy risks associated with different uses & mitigation options

- Privacy stakes of DIP high because...?

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## Deep Package Inspection (DPI)

- Differentiation of privacy risks associated with different uses & mitigation options
- ISPs critical bc.
  - Gateway
  - Changing ISP difficult
  - Invisible mission creep

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## Deep Package Inspection (DPI)

- Use cases and mitigation possibilities?

# Cooper
## Deep Package Inspection (DPI)

- Use cases and mitigation possibilities

| | | Privacy Risk Mitigation | | | | |
|---|---|---|---|---|---|---|
| | | Limiting Depth | Limiting Breadth | Limiting Retention | Disclosing DPI | Offering Choice |
| **Use Case** | Usage Monitoring | + | + | + | + | + |
| | Congestion Management | + | + | + | + | − |
| | Prioritized Services | + | • | + | + | - |
| | Troubleshooting | − | + | • | + | + |
| | Behavioral Advertising | − | • | • | + | + |
| | Content Filtering | - | • | • | + | - |
| | Proactive Security | − | - | • | • | • |

# Cooper
## Deep Package Inspection (DPI)

- Example Application of Framework?

# Fuchs
## Web 2.0

- Conceptual Framework?

- Central Ideas?

# Neutral versus negative concepts of surveillance (Fuchs 2011)

- "Neutral surveillance approaches define surveillance as the systematic collection of data about humans or non-humans. They argue that surveillance is a characteristic of all societies." [e.g. Anthony Giddens]

- "There are positive aspects of surveillance.
  - Surveillance has two faces, it is enabling and constraining.
  - Surveillance is a fundamental aspect of all societies.
  - Surveillance is necessary for organization.
  - Any kind of systematic information gathering is surveillance."

# Neutral versus negative concepts of surveillance (Fuchs 2011)

"Negative approaches see surveillance as a form of systematic information gathering that is connected to domination, coercion, the threat of using violence or the actual use of violence in order to attain certain goals and accumulate power, in many cases against the will of those who are under surveillance."



e.g. Michel Foucault 1975 "Surveiller et punir": Panoptikum

Surveillance architecture by Jeremy Bentham end of 18th century

# Fuchs
## Web 2.0

- Neutral versus negative concepts of surveillance
- Asymmetric power structure

# Fuchs
## Web 2.0

- Example Application of Framework?

# GROUP ACTIVITY

**Select two** out of these three topics:

1. Deep Package Inspection by ISPs (for service optimization and revenue generation)
2. 'dataveillance' by social media websites
3. Internet traffic monitoring and data mining by government agencies

and discuss the following questions:

– What is at stake for Internet users (you and me)? What are the potential harms or benefits?

– What are conflicts or points of friction when discussing this issue?

– To the extent that there exists disagreements either within your group or in society, what exactly is this disagreement about, what assessments or values are at odds with one another? Why?