

# Mobile and Ubiquitous Computing

## Revision Class

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## Module overview

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- Ubiquitous computing paradigm
- RFID
  - Principle, middleware, network services
- Locations Sensing
- Software
  - Mobility, services
- Cross cutting theme
  - Privacy, security and trust

- Operating principle
- System components
  - reader, tags
- Middleware
  - Role
    - Single API, traffic reduction
  - Mode of operation
    - event based, filtering, aggregation

- Network services
  - ONS discovery
  - EPC DS (role, principle of operation)
  - EPC IS
    - Profiles
    - Containment

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# Location Sensing

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- Location sensing techniques
- Properties/characteristics of different techniques
- Examples: GPS, proximity tags, EMF scene analysis
- Sensor fusion (how to)

- Mobile IP
  - Compare against traditional IP
  - Issues of managing mobility
- Service discovery
  - Characteristics
  - Examples of approaches
- Placelab
  - Techniques
  - Accuracy/advantages

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# Privacy, security, trust

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- Issues
- Challenges
- Questions to address
  - Initial entitlement:
    - Allocation of property rights
    - Who should get the initial right to control the information generated by location sensing?
  - Coercion and choice:
    - If you want discount you will get the technology
  - Societal overrides:
    - When does society, regardless of your preference, get access to the data anyway?