ppLoc – Week 1: Preparation

Literature

Tracking

Kalman filtering:

- Short:
  https://www.youtube.com/watch?v=o_HW6GnLqvg
- Detailed:
  https://www.youtube.com/watch?v=E-6paM_Iwfc
- Reading:
  For example, "Bayesian Estimation and Tracking: A Practical Guide" by Anton J. Haug
  or, “Optimal State Estimation: Kalman, H∞ and Nonlinear Approaches”, Dan Simon

Image processing:

- Basic opencv object detection techniques should suffice:
  https://www.geeksforgeeks.org/detect-an-object-with-opencv-python/
- Other online tutorials

Privacy-Preserving Estimation and Localization

These papers are more advanced. We will provide more details during our meetings.

- Encrypted Multisensor Information Filtering:
  https://isas.iar.kit.edu/pdf/Fusion18_Aristov.pdf
- Privacy-Preserving Localization Using Private Linear-Combination Aggregation
  attached to e-mail.
- Cryptographically Privileged State Estimation with Gaussian Keystreams
  attached to e-mail.

Todos

- Understand Kalman filtering
- Study basic of object detection in python
- Gantt chart for semester