1. Goals
- Evaluate state of the art multi-target multi-view tracking algorithm with a publicly available implementation.
- Introduce a new team sport benchmark dataset.

2. Conclusions
- The used implementation doesn’t include appearance model and fails frequently on preserving person/player identity. Also most of the published appearance models can’t distinguish between similar players of one team.
- Special attention should be payed to background subtraction of slowly moving objects.

3. Dataset
- multi-camera floorball dataset with tracking ground truth
- acquired indoor with constant lighting
- 8 synchronized cameras
- 12 players of 2 teams
- 20 frames per second
- resolution 960 × 768 pixels
- camera calibration included
- groundtruth: player positions every 2 seconds or 40 frames until the first player switch in the 21st second, 3d player positions triangulated from multiple views

4. Methods
- input: multi-view sequences of images
- perform background subtraction to get sequences with foreground objects
- for every camera view:
  - using camera calibration generate ground grid positions and player bounding boxes (only a few shown)
  - create probabilistic occupancy map
- for every time frame:
  - create probabilistic occupancy map
  - for every position repeat:
    - for every camera view:
      - update probability of a player on the position by comparing actual image with synthetic images
      - until convergence

5. Results
- evaluation of 10 players - without goalkeepers
- slowly moving goalkeepers are incorrectly segmented to background
- identity is not preserved

6. References

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