





MARCH 6, 2014

Future@SystemX

Visual odometry

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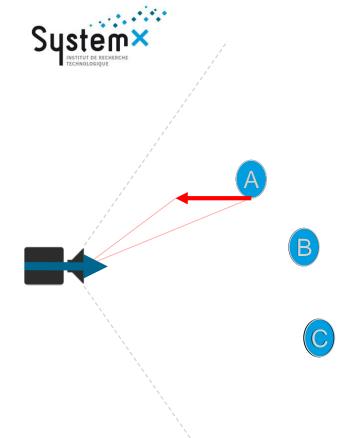






Visual Odometry

Analyzing forward displacement



- What does it mean?
- How does it work?
 - Snapshot 1
 - Snapshot 2
- Measuring Mobile displacement by scene comparison



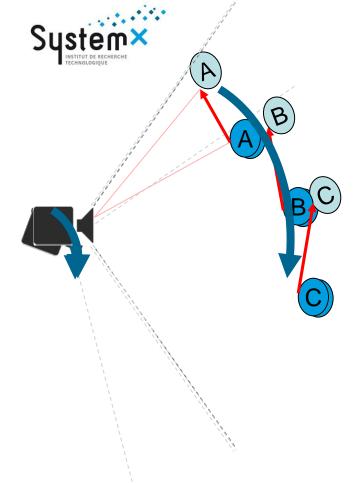






Visual Odometry

Analyzing circular displacement



- What does it mean?
- How does it work?
 - Snapshot 1
 - Snapshot 2
- Measuring Mobile displacement by scene comparison











Snapshots' analysis

- Selecting Point of Interest (POI)
- Matching POIs between snapshots
- Computing POIs' displacement between pictures

Snapshots' comparison issues

- POIs loss
- POIs' own movements
- Scale factor
 - 3D vision
 - Additional reference
- Choosing a subset of Matched POIs to Derive the video camera displacement & orientation











