

Vehicle Kinematics and Dynamics

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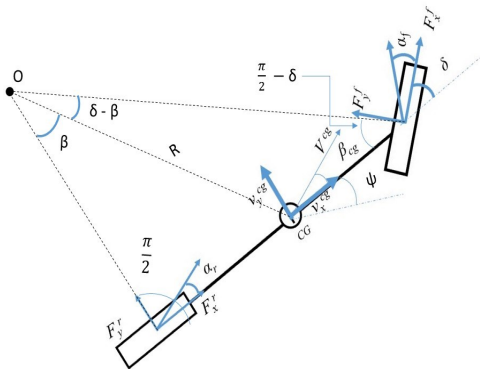
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- 1 Vehicle Kinematics Small Slip Condition
- 2 Semi-Direct Visual Odometry

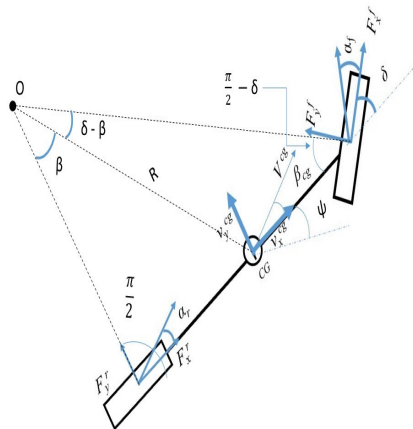
Bicycle Model



Bicycle Model Vehicle's planar kinematics can be represented as a single track bicycle.

Slip Angle

Loop Closure The slip angle β can be calculated from sine law from based on the geometry shown in the bicycle model and derivation from [?].



LSD SLAM On MAV

LSD SLAM using MAV Micro Aerial Vehicle (Parrot Bebop). Ultrasonic and air pressure sensors are used for improving scale measurements [?]. lower text

`figs/LSD_bebop.png`

Fast Semi-Direct Visual Odometry (SVO) The SVO process [?].

`figs/SVO_pipeline.png`

Multiple Columns

**Fast Semi-Direct Visual
Odometry (SVO) Results** The
SVO Mapping results for
outdoors environment using a
Micro Aerial Vehicle [?].

`figs/SVO_results.png`

