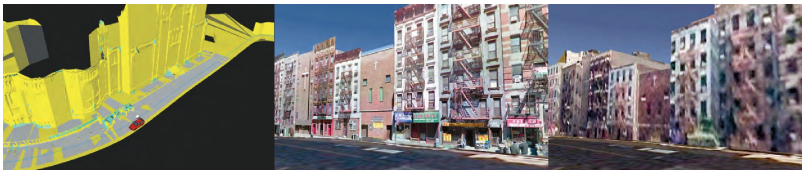


Google Street View: Capturing the World at Street Level

D. Anguelov, C. Dulong, D. Filip, C. Frueh, S. Lafon,
R. Lyon, A. Ogale, L. Vincent and J. Weaver (COMPUTER 2010)



- ▶ Google Street View captures panoramic imagery of streets in hundreds of cities in 20 countries
- ▶ Technical challenges in capturing, processing, and serving street-level imagery
- ▶ Developed sophisticated hardware, software and operational processes
- ▶ Pose estimation using GPS, wheel encoder, and inertial with an online Kalman-filter-based algorithm
- ▶ Camera system consisting of 15 small cameras using 5 MP CMOS
- ▶ Laser range data is aggregated and simplified by fitting a coarse mesh
- ▶ Supports 3D navigation