

Instant Auto-focus using Structure From Motion

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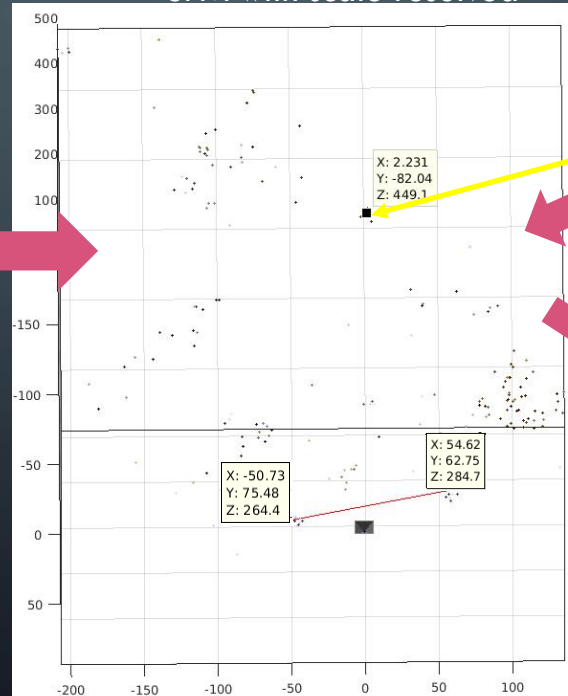
Motivation:

- Range Finders - Manual
- Active AF - Sonar, IR Triangulation
- Passive AF
 - Triangulation (CCD, solid state)
 - TTL Phase detection
 - Contrast detection (Hill climbing)
 - Hybrid AF (and Dual Pixel)

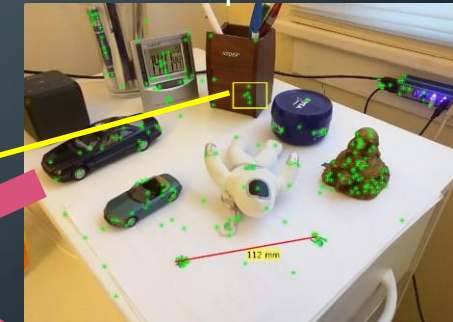
SFM based AF:

- Scale Ambiguity
 - Tracked based solution
 - Inertial Sensors
- Real-time SFM
- Focus should be constant

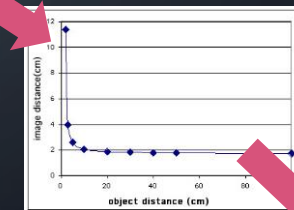
SFM with scale resolved



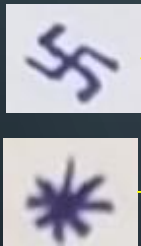
Focus request



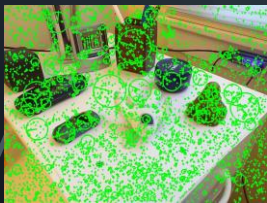
Focus Calibration data



Move Actuator



Locate Tracker



SIFT Features