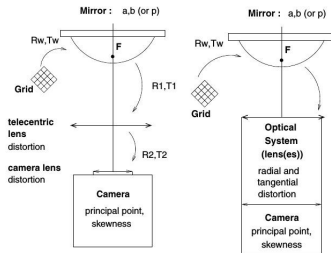


Single View Point Omnidirectional Camera Calibration from Planar Grids

C. Mei and P. Rives (ICRA 2007)



- ▶ Flexible approach for calibrating omnidirectional single viewpoint sensors from planar grids
- ▶ Based on exact theoretical projection function with added well identified parameters to model real-world errors
- ▶ Reduce large number of parameters necessary for Gonzalez-Barbosa method using the assumption that the errors are small due to the assembly of the system
- ▶ Using the unified model of Barreto-Geyer to obtain a calibration valid for all central catadioptric systems
- ▶ Selection of only four points necessary for the initialization of each calibration grid
- ▶ Validation with calibration of parabolic, hyperbolic, folded mirror, wide-angle and spherical sensors