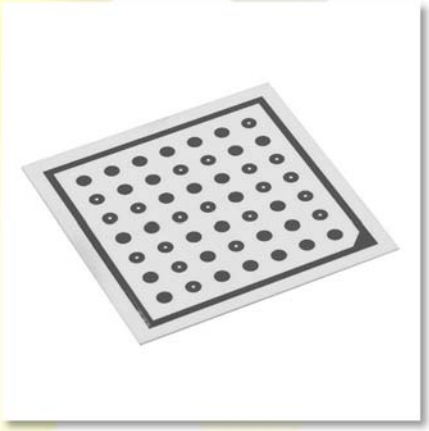
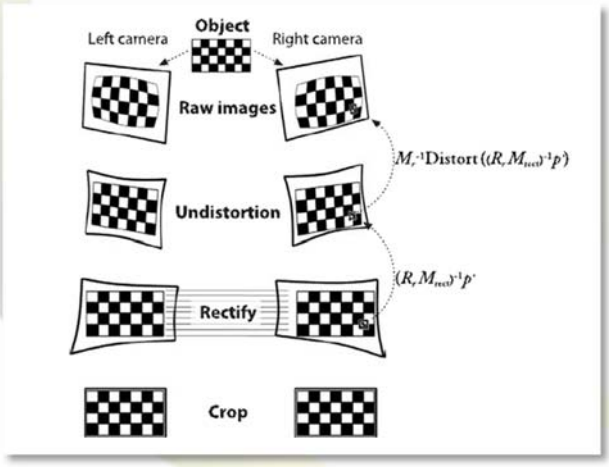
Stereoscopic 3D Vision System

3D vision system based on stereoscopic systems in cooperation to increase the redundancy of the coordinate acquisition and the orientation determination. To capture the data, characteristic points of an object are used to transfer these 3D object information to a robotized production line, VGR (Vision Guided Robotics), which then processes the objects and thus automates the production process. These tasks can ultimately be done with a robot or with multiple robots that manage themselves between them.

The image processing algorithms developed by **Ines Optics** are based on complementary information from 2D and 3D analysis to provide greater robustness and accuracy.



Ines Optics has developed the stereoscopic system calibration tools for rapid implementation and commissioning according to the particular characteristics of the application, and for the correction of deviations by image rectification.



We have also developed communication libraries with robots of brands such as Fanuc and Yaskawa, and we are currently working on the integration of our software in Robot Operating System (ROS). The Robot Operating System (ROS) is a flexible framework for writing robot software. It is a collection of tools, libraries, and conventions that aim to simplify the task of creating complex and robust robot behaviour across a wide variety of robotic platforms.

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