

## ABSTRACT PRESENTATION

Title: **How active alignment maximises performance of optical imaging systems**

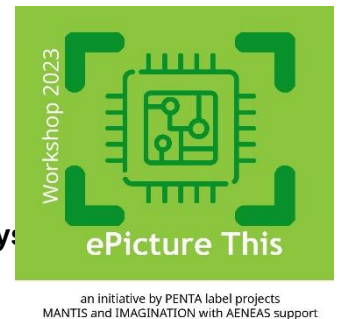
Presenter name: Dennis van Beek

Company name / Institute: Adimec Advanced Image Systems BV

Project name: Mantis Vision

Funding group: Penta / ~~Xecs~~ / Euripides / ECSEL / KDT

Abstract can be published on website:  YES  NO



Provide abstract of 500 words maximum. Use font ARIAL, size 11.

If figures are used, the text plus figures must stay within this one page.

There are many possibilities to focus an optical imaging system, such as manual focus or a motorised autofocus, but also 'active alignment'. This presentation explains what active alignment is, how it works and when it is, or is not, useful for your application. Active alignment is used to precisely focus a fixed focus lens, once, during the production process of the imaging system. This is done by projecting a focusing target at the focus distance of the application and measuring the through focus performance of the lens, after which the image sensor is fixated at the best focus position of the lens. This best focus position is tailored to the application. Advantages of active alignment include a quantitative performance measurement of the optical system, higher precision than other focusing methods and a more robust product without any moving parts for focusing. Because the basis of the alignment method is based on an optical measurement, the performance of all imaging systems is measured during the alignment. The focusing targets are specifically made to focus upon, thus the focus can be more precise than an autofocus. The sensor is fixated after the alignment procedure, and there are no moving parts required for focusing after the production procedure of the camera. Adimec has developed a machine for active alignment for medium volume production. Interested to discover how it works? Let us meet at ePictureThis!