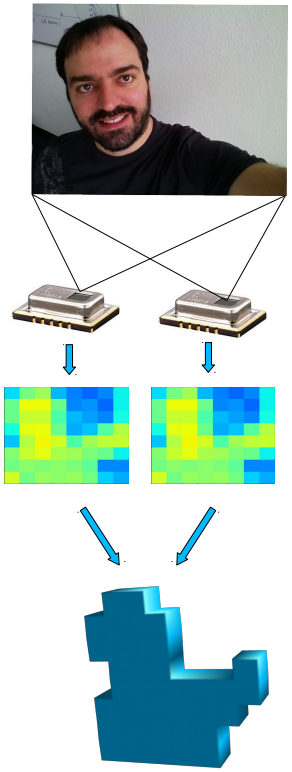
ACTLab STUDENT PROJECT

UNIVERSITÄT PASSAU

Low-resolution 3D Thermal Object Reconstruction



Thermopile array sensors are finding their way into the main stream as low cost *real presence* detection sensors. In the mean time, office building's applications evolve and require more complex information. In particular, research has shown that rich context information can be used in buildings to improve energy savings and user comfort. An approach to understanding the context of a user in the field of view is to add the component of distance from the sensor. By knowing where the user is located in all three spacial axis, the user's activity can be estimated. The aim of this project is to use 2 or more 8 x 8 thermopile array sensors to construct low-resolution 3D models of objects in the sensors' field of view. Additionally, you are required to build a way to visualize the model and its current state.

Project type	BSc Seminar, BSc Thesis
Starting date	Summer term 2016
Work distribution	30% experiments, 30% theory, 40% programming
Useful knowledge	Python and Arduino programming.
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