

Research Project

2D Image to 3D Model

Description

The Professorship Digital Signal Processing and Circuit Technology is developing methods for human behavioral analysis. For the presentation and the generation of synthetic data and for further processing, 3D models are required, both from the people and their surrounding everyday objects. The majority of available sensors merely provide two-dimensional image data. Therefore, it would be necessary to generate three-dimensional data from that two-dimensional data.

This research project aims to investigate how to create a complex 3D wireframe model from one or more 2D images. This requires a comprehensive literature search in order to capture the underlying algorithms. Subsequently, the best methods should be implemented and evaluated in the field.

The working steps of this project should be:

- Literature survey
- Implement best methods
- Evaluate results (observe time, quality, texturing, number of images)

It is expected that all tasks are documented as part of a scientific written report.

Recommended experience

- General understanding of image processing