Senodis Digital Services

Robust identification methods require not only some form of physical marking, but also digital recognition for tracking and tracing. As a complete solutions provider, we have developed strong expertise in all the adjacent technologies described below, which we also offer as separate services.

Image Processing

To ensure optimal readability of our codes, we continuously monitor the quality of our printed patterns using classical and machine learning approaches to image processing. Typical challenges are the localization and segmentation of such images, where the pattern (e.g. DMC) needs to be localized in the image and the modules (blobs) need to be accurately segmented in order to extract geometrical features.

Predictive Maintenance

Printing with custom inks has its quirks, as the valves in the print heads may clog, leading to a failure of the whole marking system. Preventing such events is of uttermost importance which means those should be known in advance. By means of continuous monitoring of the printing quality, special models can be trained that are able to predict possible outages (RUL).
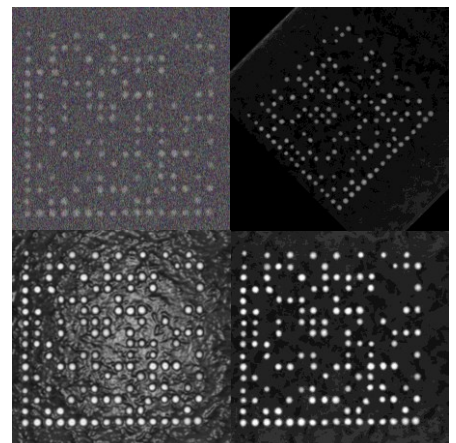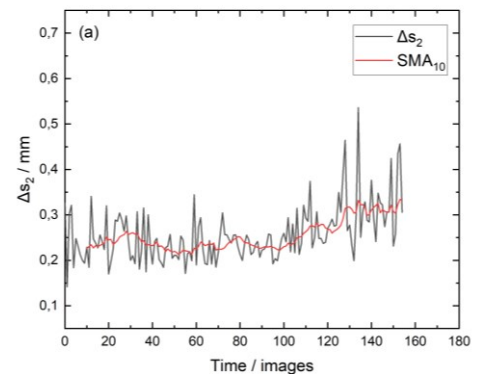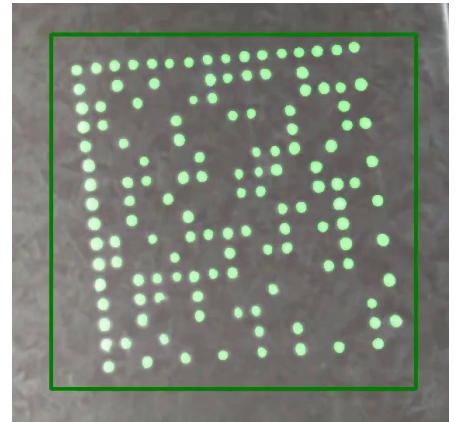
Data Generation and Augmentation

Developing and testing new technologies requires data that often is sparse or even not available. For such cases synthetic data generation and data augmentation comes in handy. This way, new algorithms can be developed to a mature and robust state.

Sovereign Data Exchange

The most difficult problems in the communication between companies are the lack of trust and the lack of control. The vast amount of data renders manual access control impossible. As early adopters of sovereign data spaces, we use decentralized data space connectors based on the IDS framework for sovereign data exchange between enterprise silos.

DevOps

Fast and simple solutions are good for testing, but rarely robust and usually not usable for third parties. We therefore emphasize designing and testing our applications accordingly and transferring them into consistent runtime environments with well-documented interfaces.

Contact us

Would you like to know, whether our technology can tackle your problem. We will be happy to advise you.