

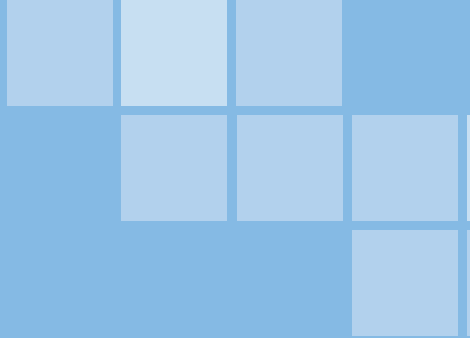
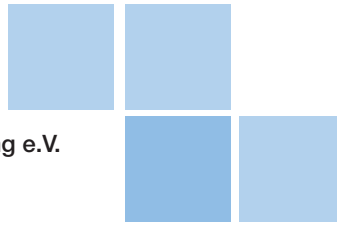
Image processing is not limited to the processing of digital pictures. According to our understanding and approach, this field is an interdisciplinary process of various knowledge areas, such as physics, optics, signal and system theory, information technology and informatics, which are all tightly linked.

This integrated point of view and the wide availability of competencies in these areas is our key to solve innovative challenges in the field of image processing / pattern recognition and transfer our knowledge into customer-oriented product solutions.

Strong individually, stronger together...

Against this background the partnership between the **Zentrum für Bild- und Signalverarbeitung (ZBS) e.V.** and the **Gesellschaft für Bild- und Signalverarbeitung (GBS) mbH** offers optimal prerequisites for our partners and customers.

The solid foundation for this is built upon the extensive knowledge and wide body of experience from a multitude of successfully completed research and industrial projects realised since the inception of this partnership

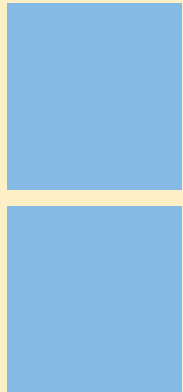
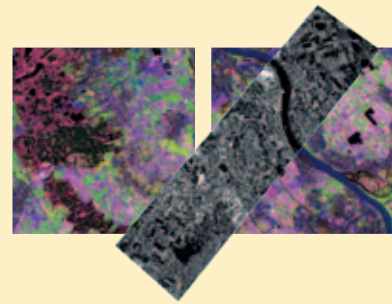


Since 1994 the **ZBS e.V.** has been offering support for the realisation of challenging solutions in the area of signal and image processing mainly as part of joint projects or direct contract work.

An important element of the society's activities is pre-market research and development as well as the transfer of fundamental academic research results into usable methods, prototypes and products for our customers.

Our primary areas of research are concentrated on the following areas:

- Image restoration
- Multimodal image processing and analysis from clearly defined industrial environments up to complex scenes in the outdoors, remote sensing and medicine
- Colour sensors and multichannel sensor signal processing, colour image processing
- 3-D data generation and 3-D data processing



An integrated approach is our strength

The tight personal connection to the Ilmenau University of Technology with its departments situated there assures our partners and customers high-level solutions at the most current state of research.

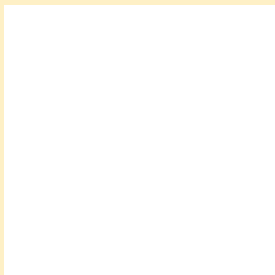
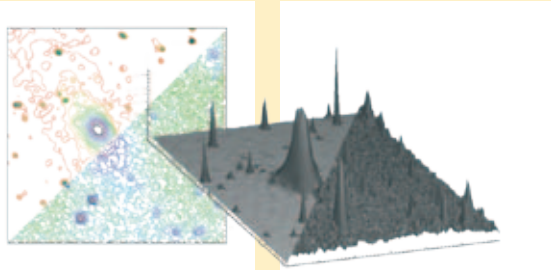
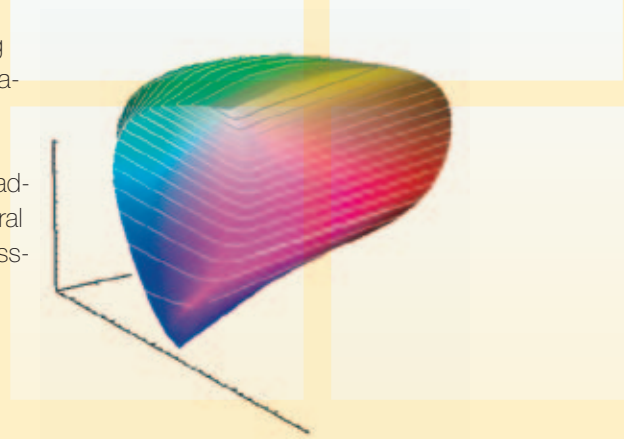
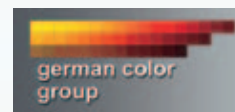
In addition we are:

- One of the **German Color Group** for the support, spreading and establishment of modern technologies and methods in the area of colour sensors and colour image processing into practical industrial applications.

www.germancolorgroup.de

- Competent partner for postgraduate further education in several science fields of image processing and pattern recognition.

www.visionexperts.de



The **GBS mbH** as a subsidiary of the ZBS e.V. has been a competent partner in the area of image processing for solving inspection tasks since 1997. For its activities the GBS mbH can fall back on the existing body of experience and the competencies of the ZBS e.V. The specialisation in three product groups under the brand name of **smartVIS** forms the important basis for the successful work of the GBS mbH.



Innovative products based on a solid scientific foundation

Customer-specific solutions for the tasks of production quality control

Individual integrated systems with handling

Software packages for rapid prototyping and image processing applications

Systems for image-based printed image control

In-line monitoring of printing quality and process under continuous operation

www.smartVIS-print.de

Systems for non-contact 3-D surface measurements

Product solutions for measurement tasks from macro to nano scales

www.smartVIS-3D.de



The partnership ZBS/GBS has successfully carried out more than 150 research and industrial projects since 1994.

Excerpt from our list of references:

- B.Braun Melsungen AG
- Carl-Zeiss AG
- CLEANAWAY PET International GmbH
- Coperion GmbH
- Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)
- eZono GmbH
- Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.

Experience from a multitude of projects since our foundation

- Fresnel Optics GmbH
- Hella KGaA Hueck & Co.
- JENOPTIK AG
- LDT Laser Display Technology GmbH
- MAZeT GmbH
- MEDAV GmbH
- RWE Power AG
- SCHOTT AG
- SIGG Switzerland AG
- SIOS Meßtechnik GmbH Ilmenau
- TECHKON GmbH
- Vision & Control GmbH
- Wincor Nixdorf AG

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