

**Preliminary Examination | Analysis | Concepts | Tailoring | Requirements | Programming and Managing Specifications**

Project preparation and basis of decision-making, requirement specifications, programmer's handbook, form sheets (reviews, tests, acceptance), acceptance specifications, standards, project support & controlling, performance of reviews and audits.

**Plans**

Quality management plan, configuration management plan, project structure plan, product structure plan, test plan with test specifications.

**Tests**

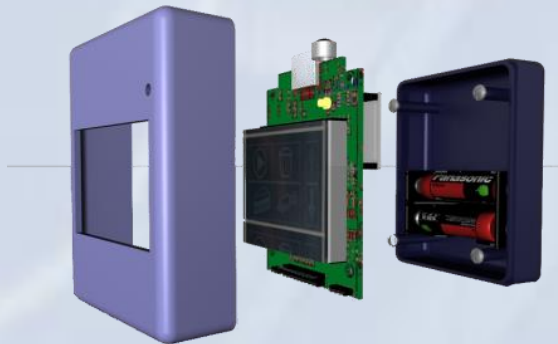
Requirements (functional, safety, etc.), specifications, test surroundings, black box testing, white box testing, functional tests, HIL, SIL, module, component and system tests with established SW-Tools according to requirements and/or using self-developed individual test surrounding.

**Support**

Comprehensive support in the development of high quality software. Grading of methods, activities and products. Support for their effective and price sufficient implementation. Planning and integration of test surroundings.

**Quality Management System According to ISO 9001:2008**

The quality-management of the TROUT GmbH is certified according to ISO 9001:2008. The underlying model for software-development is the "V-model" (developing-standard of the government).



**TROUT GmbH**

TROUT GmbH is a business enterprise specialising in information technology and systems engineering. It comes with comprehensive know-how which is based on many years of project work in the areas of aerospace, automotive and medical technology.

**PRODUCT SELECTION**

**NIVA<sup>B</sup>**

Non-invasive measurement system for blood glucose level. Data storage every minute, continuous measurement, facilitates diagnosis and therapy.



**SeeBahn**

System for real-time representation of moving objects' travel routes at sea for a distance up to 25 km including a video function feature.



**PlaceView**

Service to display detailed information on sites and streets. Panoramic images, exact location positioning and addition of digital maps.



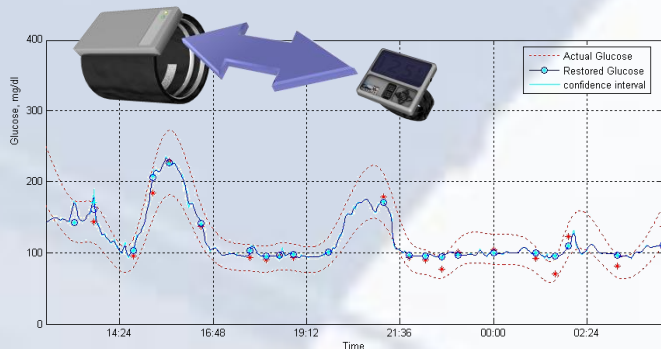
**3DAM**

Realisation of an ATC-System of the „Virtual Towers“; 2D- und 3D-visualisation, control at close range with integrated traffic management and many features.



**EventWalker**

System for providing mobile retrievable information on major tourist events, expanded personality profile (Augmented Identity). Using GPS the user can find sights and events.



**TROUT GmbH**

Parkstraße 28 · D-34119 Kassel  
Fon: +49 561 810497-0 · Fax: +49 561 810497-15  
E-Mail: info@trout-gmbh.de · www.trout-gmbh.de

## DEVELOPMENT

### Application Development

Customer designed solutions from request analysis to system integration. Support for all phases of the software development process. Role-taking (project, quality or configuration manager, developer) according to V-model.

### Documentation

Development, compilation and provision of all the necessary documentation for software development according to standards. Documents for medical systems according to FDA specifications.

### Support and Maintenance

Support for developed applications in operation.

### Training Services

Request analysis, concepts, training for project leaders, developers and users. Computer/Web based training (CBT/WBT).

### Engineering

Engineering services in specialised areas such as electronics, high-frequency engineering: EMC - Electro Magnetic Compatibility, prediction, concepts, testing. Antenna technology, signal transmission.

### Software Engineering / Re-Engineering

Approaches, analysis, evaluation, concepts, methods, standards, tools and documentation.

## RANGE OF METHODS

### Development Environments

Microsoft Visual Studio C++/C#, QT Creator, Borland C++ Builder, CoDeSys, Keil µVision, CooCox, Eclipse, NetBeans, LabView

### Visualisation

UML-Tools MS Visio, IBM Rhapsody, graphics library Ogre3D, DirectX, OpenGL

### Operating Systems

Windows 2000, Windows XP, Win7, Win10, Win 10 IoT, Linux Ubuntu, Ubuntu Mate, Raspbian

### Analytics Tools

MATLAB and Simulink, CANALyser, CANDB, static code analysis with PC-Lint and CCCC

### Database Management Systems

MySQL, SQLite, Oracle Database, Microsoft SQL Server

### Embedded

PCB-Design with Eagle, microcontroller-programming (PIC, AVR, ARM7, ARM Cortex M3/4 ...)

### Methodology

Requirements and test management with IBM (Telelogic) Doors, version management with Tortoise SVN and CVS, ticket system Mantis BT, use of self-learning algorithms with artificial neural networks, system design and concepts according to V-model (development standard of the government).

Efficient, project-specific support in the application of SW-tools (Requirement-Management to Acceptance-Tests) for high-quality development of systems, also for discipline-comprehensive activities.

## CONSULTING

### Pre-studies | Analysis | Concepts | Research

Project preparation and decision bases, requirement and functional specifications, project accompaniment & controlling, running of reviews and audits.

### Offer Development and Production

Support in the planning and development of technical offers for high-tech projects with IT bias. Calculation of commercial requirements.

### Project Roles

Broad support in the implementation and completion of projects, following given standards in project, quality and configuration management.

### Critical Projects

"Instant Action Policy" for performance and/or cost and/or time critical high-tech projects with IT bias.

### Software Security

Information security management system, IT security strategy, and safety codes, system specific IT safety concept and technical guidelines.

### Electromagnetic Compatibility (EMC)

Analysis, concepts, measurement plans, measurement up to 20 GHz according to commercial and/or military standards, quick tests, evaluation, optimisation, HW development according to EMC standards.

TROUT works closely with the universities of Kassel, Göttingen and Darmstadt and is always on the current status of research and development, maintaining close contact with engineering students and graduates regarding term papers and bachelor theses.

