



## Latest Technology for More Safety

The current reorientation of the armed forces involves an increasing fusion of different task domains and their integration into international missions. Advanced software solutions are used in this context to support the armed forces in handling safety issues.

Common applications in defence technology are projects in training simulation, reconnaissance, command, logistics and operational support. Innovative and robust system solutions are in demand which meet the highest technical and ergonomic expectations.

## Know-how and Expertise

Based on our long-term know-how from software development and our experience in handling complex systems, we also develop software for on-board computers, drivers for special interface cards and test tools for supporting the integration on target systems with real-time capabilities. Of course, we also meet the high performance-related requirements for these systems.

## Scope of Services

- Robust system solutions for the highest technical and ergonomic requirements
- Safety-critical systems
- International coordination of requirements and interfaces
- Adaptation and integration of heterogeneous subsystems
- Training systems

## Together to Success

In cooperation with our customers and their end customers we jointly establish system requirements which we translate efficiently into technologically sophisticated results. Integrating subsystems originating from national and international development projects and safeguarding consistent interoperability beyond the individual system limits are only possible by close cooperation and coordination.



## Specific Project Experience

- A400M cargo plane
- Eurofighter multirole combat aircraft
- Tornado combat aircraft
- NH 90 multirole helicopter
- Tiger combat helicopter
- German Army command information system
- WES MARS 2
- ARES command system
- Operational support systems (OSS)
- MEADS Medium Extended Air Defence System (battle management & multifunction radar)
- ASR-x, TRS3D, TRS4D, MFCR radar systems
- AGS Airborne Ground Surveillance ground control station
- HERGIS German Light Aircraft Group command and weapon operation system
- EuroHawk reconnaissance system
- Generic servo drive systems
- SARah satellite-based radar reconnaissance system
- FAUST tactical command equipment
- COBRA Counter Battery Radar
- Fennek armoured reconnaissance vehicle
- Roland combat training simulator
- Frigate 124, frigate 125, corvette K130

## Functional Safety

- Planning and implementation of projects in accordance with the standards listed below
- Redesign and documentation of existing projects according to standards
- Consulting services for development in compliance with standards

## Systems Engineering

- Requirements management at system level
- Creation of system architectures / designs
- Model-based development

## Software Development

- Requirements management at software level
- Creation of software architectures
- Software unit design and implementation
- Tool development
- Development of simulation environments

## Support Processes

- Project management
- Quality assurance
- Configuration management
- Problem and change management
- Tool development
- Documentation
- Homologation according to standards
- System and software audits
- Development according to V-model
- Development according to standards (see Standards)

## Verification and Validation

- Software integration and system testing
- Creation of automated unit tests (tool-based or manually)
- Analyses
  - Static code analyses
  - Dynamic code analyses
  - Code reviews
  - Object code analyses
  - Floating point arithmetic analyses
  - Coverage analyses (MC/DC etc.)
- Validation
  - System requirements
  - Software requirements
- Tool qualification

## Standards

- MIL-STD 882E
- IEC 61508
- DO 178B-C (DALD - A) / 200 A / 330 / 332 / 278 A
- MIL-STD 498 / DOD-STD 2167A
- ARINC 661 / 615A / 653 / 664
- MIL-STD 1553 / STANAG 3838
- ARP 4754
- V-Modell XT
- SCRUM
- KANBAN

## Tool Experience (synopsis)

- Unix, Linux, Intergrity, LynxOs, CentOS, RedHat, VxWorks, Windows
- Jira, Confluence, Teamtrack, Trac, ClearQuest, MS Project
- SVN, git, CVS, ClearCase, PVCS, MKS/PTC, Serena Teamtrack
- DOORS, WEXP, Polarion ALM, RequisitePro
- Enterprise Architect, Rational Rose, Rhapsody
- Matlab, Simulink
- MS Visual Studio, Eclipse, NetBeans, Keil, Greenhills, Apex
- C, C++, C#, Java, Python, Ada, Fortran, Delphi, GLSL
- QT, .Net, WPF, MFC
- OSGi, Swing, Carmenta, MPI, Boost, Corba, OPEN GL, DONAR
- MS SQL Server, Hibernate
- Jenkins
- Vera++, Bauhaus, PC Lint, Flexlint, QA-C
- VectorCast, Cantata++, Tessy, TPM ADS2
- Rational Robot, Nunit, Junit, Mockito, expecco
- Wireshark