

# ***SYSTEM HOUSE FOR AUTOMOTIVE INFOTAINMENT SYSTEMS***

Professional Services  
MOST Compliance Test House  
Training and Workshops  
Products



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## COMPANY

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The company RUETZ SYSTEM SOLUTIONS was founded in 2006 and is specialized in car infotainment based on MOST technology. RUETZ SYSTEM SOLUTIONS is an “associated partner – supplier” with MOST Cooperation and actively contributes to compliance verification within the MOST Technical Compliance Group.

We offer consulting services tailored to the specific needs of our customers in the car industry, advising you on specification and development of MOST-compatible components and devices, and on design and development of appropriate test series.

As a test house accredited by the MOST Cooperation, we support developers and test engineers through all steps of the process required for newly developed devices and components to comply with MOST Compliance – up to certification of control units according to the binding standards set by the MOST Cooperation.

Our consulting and MOST training services are further enhanced by a full product portfolio, which companies can use to carry out physical layer testing (PhLSTT for MOST150), Core Compliance testing (TESTERLYZER), MOST system testing and simulations (TTsuite MOST).

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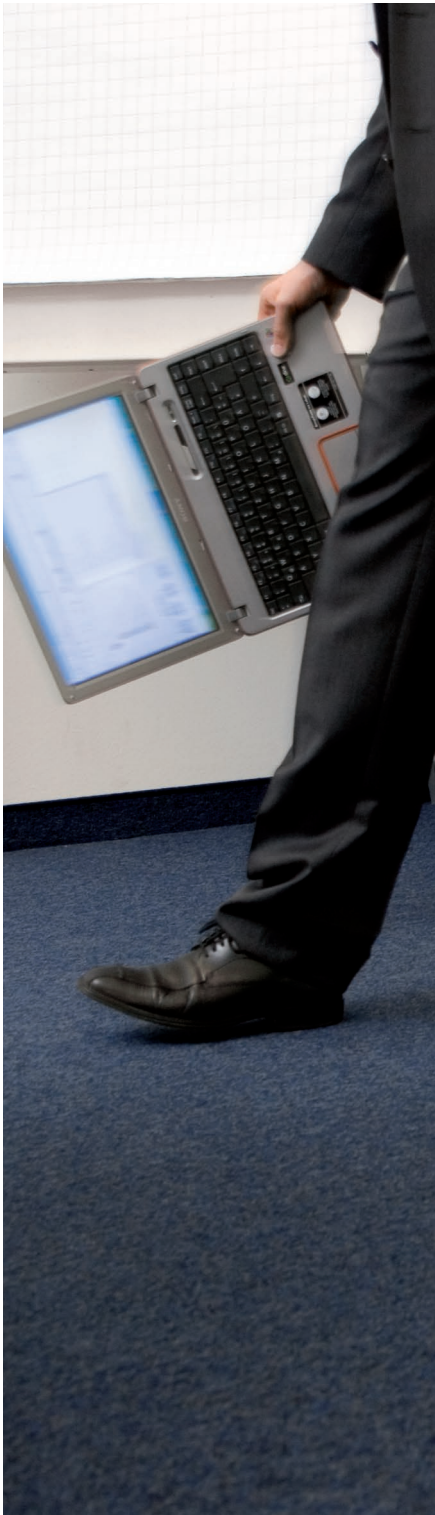
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# SYSTEM HOUSE FOR AUTOMOTIVE INFOTAINMENT SYSTEMS

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## MOST COMPLIANCE TEST HOUSE

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RUETZ SYSTEM SOLUTIONS is a test house accredited by the MOST Cooperation and a certified test laboratory according to DIN EN ISO/IEC 17025. As a member of the MOST Cooperation and as an active member of the MOST Compliance Technical Group, we are involved in the design of all MOST scopes.

We test and certify control units according to scopes:

- MOST Optical Limited Physical Layer Compliance (hardware)
- MOST Core Compliance (network functionalities)
- MOST Profile Compliance (application)

For the Japanese market we have an ongoing cooperation with our partner Unitec Co. Ltd. for testing the scopes “MOST Core Compliance” and “MOST Physical Layer Compliance” on the basis of MOST50 ePHY.

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### Accompanied certification

We place great importance on advising and accompanying our customers throughout the entire certification process. We provide consultancy and support services to automotive manufacturers and suppliers in identifying errors at early stages of the development process. Apart from formal tests, we offer preliminary testing with regard to individual phases of development and know-how transfer packages (best practice).

### Tests specific to car manufacturers

RUETZ SYSTEM SOLUTIONS offers test routines for car manufacturers, because the MOST compliance tests are a basic qualification for systems integration. These Application Recommendation for MOST Core Functionality are based on the specifications of individual manufacturers and were developed in cooperation with them.

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## PROFESSIONAL SERVICES

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The development of new automotive technologies requires perfectly coordinated processes and workflows. RUETZ SYSTEM SOLUTIONS helps automobile manufacturers and suppliers every step of the way along the path to systems specification and systems integration of MOST devices and technologies. Our consultants will support you in developing MOST compatible specifications and advise you on defining feasible test specifications for components, network and applications.

Companies in the car industry can rely on our many years of expertise with MOST. RUETZ SYSTEM SOLUTIONS is one of the pioneers in developing MOST standards and has made a decisive contribution to the development of the MOST bus system. As a MOST Test House we support the car industry in the process of certification of new car infotainment products. And, last but not least, we have a broad range of tools for standardised development processes and test routines.

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### Systems specification

We support manufacturers and suppliers in all points of systems specifications, as well as preparing:

- Function Catalogues in XML- or Fibex-Format
- Dynamic specifications as Message Sequence Charts (MSC), Flow Charts or Unified Model Language (UML)
- In tandem with this, we develop the corresponding test specifications

### Component and network tests

In order to keep frictional loss in car development to a minimum, the development of new technologies and their testing should be linked together as closely as possible. We meet this demand by providing the following services:

- MOST Compliance Tests accompanying the development steps in car development
- Development and implementation of test scopes specified by car manufacturers
- Automation of component and network tests

### System tests

Every finished individual device has to integrate seamlessly into existing systems. Since systems integration is a complex process, which frequently involves subsequent changes in system specifications, we support our customers in defining all the required steps in workflow and testing.

- Testing and verifying the running of systems in applications in partial systems and in entire vehicle networks
- Feedback of results to system specifications
- Automation of system tests

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## TRAINING AND WORKSHOPS

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RUETZ SYSTEM SOLUTIONS' training concept is based on modular courses and workshops tailored to customer needs. Customers are involved at the planning stage. Companies benefit from the fact that our course leaders have many years of practical experience. Moreover, our course leaders only use up-to-date hardware and software versions and can thus guarantee a high-quality efficient knowledge transfer.

As a MOST technology partner of SMSC Europe, we are authorised to teach the SMSC training modules:

- MOST Foundation Training
  - INIC Intensive Training
  - NetServices V2 Training
  - Practice training for system integration
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## PRODUCTS

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We have a specialised and efficient test portfolio which enables us to test the development and integration of car infotainment devices on different levels.

One part of our testing environment is the fully-automated system TESTERLYZER: With TESTERLYZER we cover components and network tests according to MOST standards, thereby laying the foundation for successful systems integration. The second part is the TTCN-3-based test and simulation system TTsuite MOST, which was developed jointly by RUETZ SYSTEM SOLUTIONS and Testing Technologies. Both systems are available for MOST25 oPhy, MOST50 ePhy and MOST150 oPhy testing. For MOST150 Physical Layer testing we have developed a Stress Test Tool for measuring specific parameters as defined in MOST150 oPhy Automotive Physical Layer Sub- Specification.

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### TTsuite MOST

#### A Scalable Framework for MOST System Testing

TTsuite MOST provides users with an easy-to-use platform, allowing them to carry out tests and simulations for application of varying complexity. This tool is based on the standardised test description language TTCN-3 and uses the GFT-format (Graphical Presentation Format of TTCN-3) for defining, visualising and documenting the tests. With TTsuite MOST it is easy to describe and carry out new test scenarios. Moreover, test routines cannot only be used to carry out tests but also as test specifications.

### TESTERLYZER

#### Automate the Core Compliance testing of your MOST devices

TESTERLYZER is the test system for network testing and for the MOST Core Compliance test which accompanies development processes. TESTERLYZER has a modular structure and consists of the system components TESTERLYZER pro Compliance (testing software) and TESTERLYZER Box (measuring and automation hardware), as well as two Optolyzer® modules by the company SMSC which provide an interface to the MOST bus.

### Physical Layer Stress Test Tool for MOST150

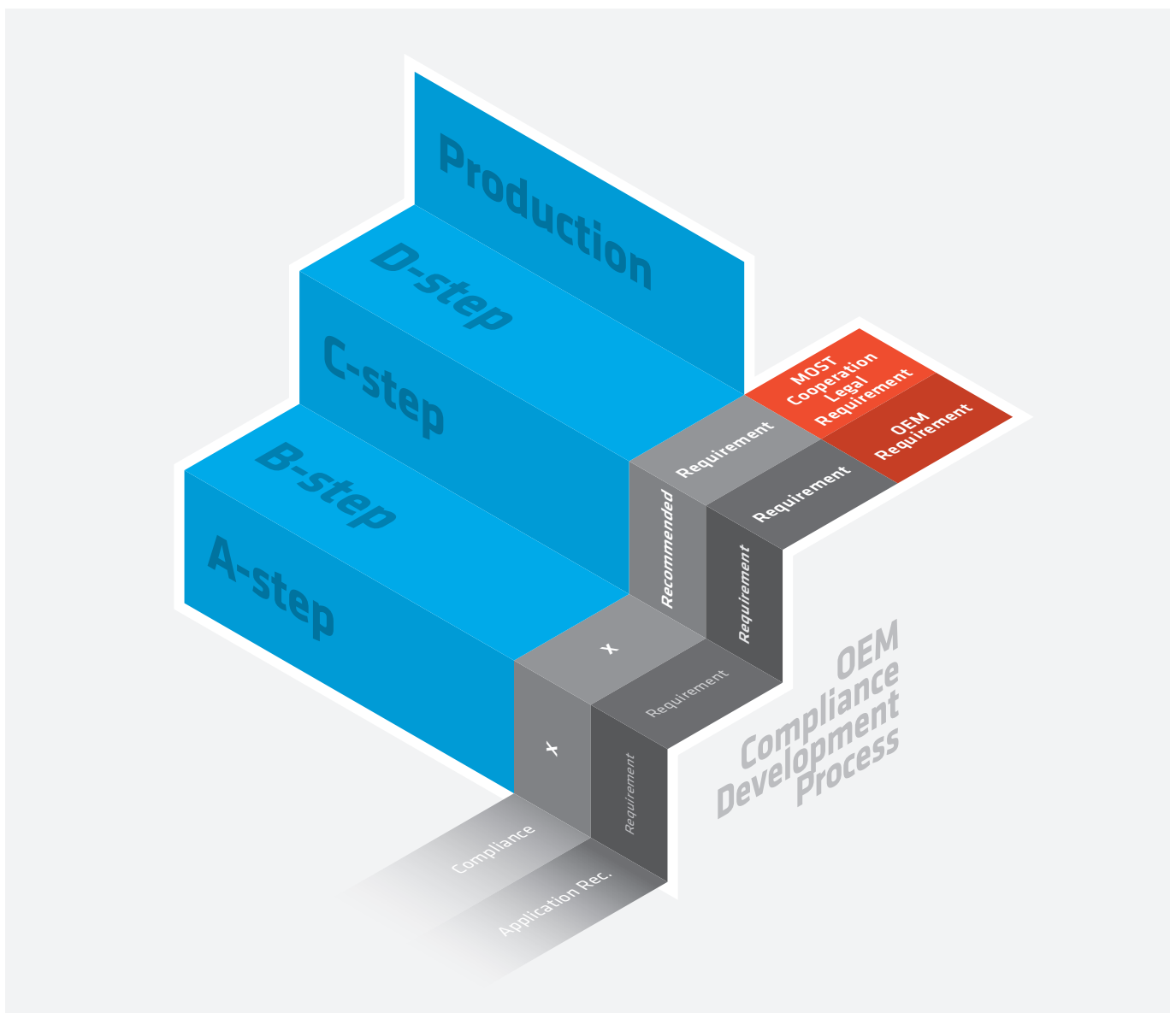
#### For Development and Production

For MOST150 Compliance Testing the Limited Physical Layer Compliance Specification defines several setups for measuring specific parameters as defined in MOST150 oPhy Automotive Physical Layer Sub- Specification.

RUETZ SYSTEM SOLUTIONS has developed the stress test tool in cooperation with MOST Cooperation to measure all necessary parameters. The main purpose of the stress test tool is to feed a MOST ECU with a stress test pattern and to check the signal of the responding ECUs for errors (e.g. Bit Error Rate).

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# EXECUTING TESTS ALL OVER THE SYSTEM INTEGRATION PROCESS



Source: Application Recommendation for MOST® Core Functionality

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