



*driving **your** success*

How 7 layers can help speed up your communications technology development



*fast and reliable solutions for
wireless communications technologies*



Technology Development Services from 7 layers will give you the competitive edge!

Engineers at 7 layers have been engaged in the development of wireless communications technologies since the late 1980's.

Thanks to the structure of their activities, they have been able to combine the scientific side of developing specifications and test cases with the practical experience of testing in highly efficient laboratories.

This has enabled us to gain extensive knowledge of a wide range of test systems and a large variety of products from diverse manufacturers.

Combining this outstanding experience with the fact that 7 layers acts as an external, independent partner makes our services faster and more reliable for you.

This way we are able to speed up the process, from the technology idea to global market access, for manufacturers of:

- Chip-sets
- Protocol stacks
- Reference designs
- Modules
- Communications platforms
- Application boards
- Measurement equipment
- Test systems



Our independent development and validation services offer you the highest level of reliability

Development of core specifications

The global success of new wireless technologies relies on the fact that they are precisely defined and specified. This facilitates the development of products that conform to specification, thus guaranteeing their interoperability. 7 layers uses both formal modeling techniques and abstract methods, as well as simulation tools, for maximum reliability in the development of precisely defined core specifications. Thanks to our independent status, development at 7 layers at this stage takes place in the interest of the general functionality of a new technology.

Development of test specifications

For the development of test specifications, it is necessary to take into account the definition of product requirements and of test purposes as well as the product set-up, test set-up, test procedures and specified test requirements. At 7 layers we use informal description in prose, semi-formal descriptions like MSCs or formal descriptions like TTCN and ASN.1 to ensure reliability.

Development of test cases

7 layers develops test cases for test system manufacturers in the earliest development stages of new technologies. Being able to offer fully workable test systems in this crucial phase provides you with an important competitive advantage.

We also offer test case development for manufacturers of platforms, reference designs and application boards as well as for manufacturers of chip sets and modules. This can be provided before official releases from standardization groups are available.

For the development of test cases we use formal test notations (e.g. TTCN) or conventional programming languages (e.g. C, C++, Visual Studio.Net). Due to our comprehensive experience with wireless communications technologies and our manufacturer independence, 7 layers develops test cases early, that correspond very closely to the official versions released by standardization groups at a later date. This enables you to benefit from earlier and faster product development of your own and your customers' products.

Test cases developed by 7 layers can be integrated into the InterLab[®] system for fast and reliable testing. This way, new test cases and their documentations become immediately available for all test systems working with InterLab[®].

Development of qualification and certification programs

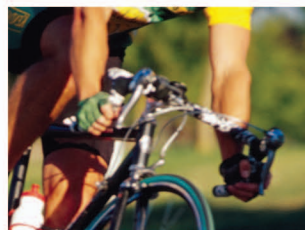
Only if the interoperability of products using a specific technology is ensured, can these products become a global success. Qualification and certification programs are being developed to ensure that this will be the case. 7 layers is closely involved in the development, establishment and maintenance of these programs and has experience with programs from the former Type Approval Advisory Board (TAAB) of the GSM World, the American PCS Type Certification Review Board (PTCRB), the Global Certification Forum for GSM and 3G (GCF), the Bluetooth SIG as well as special programs for private enterprises.

Validation of test cases and test systems

Validated test cases and systems are essential in ensuring that products undergoing tests conform to their test specification. This is most important during conformity assessment procedures.

Validation at 7 layers takes place independently of the test case development process. During validation our engineers use scalable methodologies in order to prove the correctness of test cases and test systems.

visit www.interlab.net for more information



Inter**Lab**[®]

***Let 7 layers
help drive your success***



***technology
development***



***product
development***



***market
access***

Supporting communications technology development

- Development of core specifications
- Development of test specifications
- Development of test cases
- Development of qualification / certification programs
- Validation of test cases and test systems

Increasing efficiency of research & development projects

- Consulting on integration of testing into development
- Consulting on product specifications
- Development of product specific test specifications
- Development of product specific test cases
- Development of test solutions and execution of testing
- Test analysis

Speeding up market access for communications products

- Qualification, certification and type approval services
- Testing in:
 - 7 layers' InterLab® laboratories
 - InterLab® laboratories of clients and partners
- Fast track qualification for modules and reference designs
- Interoperability testing

***The 7 layers
service
portfolio***



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