7layers
testing for a smarter world

WHY 7LAYERS IS THE RIGHT CHOICE
FOR SERVICES AND PRODUCTS LEADING INTO A SMARTER WORLD

GLOBAL TRENDS IN A WIRELESS WORLD

1985 – 1990	1990 – 2008	2008 – 2015	2015 – 20xx
Verification & Validation of Complex Systems	Verification & Validation for Connecting People Market	Verification & Validation for M2M M2P P2M	Services & Products for a Smarter World

7Layers – continuously adapting to the requirements of a wireless world ▶

History	Credibility	Capability
Complexity	Complexity [2]	Complexity [3]

THE VERY BEGINNING

1985 – 1990

Verification
&
Validation
of
Complex
Systems

1985-1999

7Layers people were involved in V&V of safety-critical computer systems across almost all industries - V&V methods and processes have been established internationally during that time.

Set-up of one of the **first electromagnetic compatibility test labs** in Germany. This was the basis for entering into the mobile communications world.

7Layers' people were involved in setting-up the **first independent private GSM test house worldwide.**

7Layers' people were involved in developing **GSM & Bluetooth® standards.**

CREATING THE 7LAYERS GROUP

1999 - 2009

1999 7Layers in Ratingen, Germany was founded, establishing something "more" than just a test house.

1999 7Layers in Irvine, USA was founded.

2000 7Layers partners with EMC Test NRW for EMC tests on vehicles, rail and machinery.

2000 7Layers cooperates with Ritt and founds Ritt7Layers in Beijing, China, the first ever cellular test lab in Asia.

2001 Founded 7Layers UK (later sold to SGS – closed in 2010).

2005 7Layers Korea is set up.

2009 7Layers Japan is founded.

2013 The 7Layers Group changes ownership and joins Bureau Veritas, a world leader in conformity assessment and certification services for a large number of industries

BECOMING A LEADING WIRELESS TESTING EXPERT 1

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testing for a smarter world

1990 – 2008

Verification & Validation for Connecting People Market

InterLab®

1999 – 2008

First certificate of accreditation for Bluetooth® regulatory testing issued in Dec.1999 - 7Layers DE is first officially accredited Bluetooth qualification test facility (BQTF).

7Layers is selling **Bluetooth® Test Management Tool** to labs in Europe, Asia and US.

7Layers develops customized 3G test services before official 3GPP test specifications and test cases are available.

7Layers **launches the InterLab® system** for professional testing that supports developers and manufacturers of complex wireless communications products and services as well as test houses with the systematic management, development and testing processes.

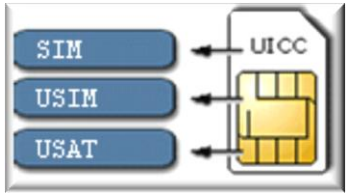
7Layers has **first US facility offering full scope Cellular and Bluetooth development, certification and qualification testing.**

Ritt7Layers is **first PTCRB test facility in Asia**.

BECOMING A LEADING WIRELESS TESTING EXPERT 2

1990 – 2008

Verification & Validation for Connecting People Market



1999 – 2008 cont.

7Layers widens its scope with **interoperability & field testing** services.

7Layers is involved in the development of the first **software-defined radio products** for military purposes.

7Layers develops **cardiac pace maker test solutions.**

InterLab® test solutions USIM/USAT for 3G are world's1st recognized Test Solutions.

7Layers has the **first test laboratories worldwide that can offer USAT tests** for the US market.

7Layers is one of the first to have implemented **Java engineering and test services** capable of verifying the most important Java ME functions.

7Layers has the **first mobile communications test laboratory offering HSUPA testing** for UMTS devices.

The world's **largest mobile phone manufacturers** come to 7Layers for testing.

NEW DEVELOPMENTS DURING DIFFICULT TIMES

2008 – 2015

Verification
&
Validation
for
M2M
M2P
P2M

2009

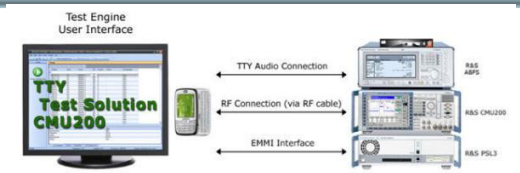
PTCRB launches its Web and Certification portal based on InterLab® System from 7Layers.

7Layers is the first test laboratory world-wide offering **DATech accredited GCF Field Trial Test Services** according to ISO/IEC 17025.

InterLab® Bluetooth RF Test Solution is first conformance RF test platform to offer validated test coverage for Enhanced Power Control.

7Layers is the first laboratory worldwide that offers **TTY 3G testing for PTCRB certification** via its InterLab Test Solution.

7Layers is first laboratory that has been certified by the BSI (German Federal Agency for Digital Radio and Security Authorities and Organizations) to test and certify the functionality, reliability and interoperability of radio products which are to be used within the BOS digital radio network.



LTE IS GAINING MOMENTUM

2008 – 2015

Verification
&
Validation
for
M2M
M2P
P2M

2010

7Layers becomes first choice **Verizon wireless LTE test laboratory** to test devices for operation on the nationwide 4G Long Term Evolution (LTE) network.

InterLab® Software System is chosen by the CDMA Certification Forum (CCF) for its CCF Test Plan Database for automated test plan generation for CDMA devices.

IL TS Bluetooth RF is world's first validated RF Conformance Tester for Bluetooth Low Energy.

IL TS LTE USIM/USAT achieves GCF approval for work item 125, covering LTE-USIM features, as first test system in the world.

LTE Signaling Conformance Test Cases are validated by 7Layers for Agilent Technologies Equipment.

7Layers has verified and validated the first ten **FDD-7 LTE Protocol Test Cases** for the Rohde & Schwarz R&S® CMW500.

7Layers is essential **member of the Telematics Initiative in Germany** starting 2011.

More & more **M2M** clients are coming to 7Layers.

CONTINUOUSLY AT THE FOREFRONT OF NEW DEVELOPMENTS

2008 – 2015

Verification
&
Validation
for
M2M
M2P
P2M

2011

7Layers launches the **Feature Explorer**, the first ever automated system that detects PICS/PIXIT information of wireless devices.

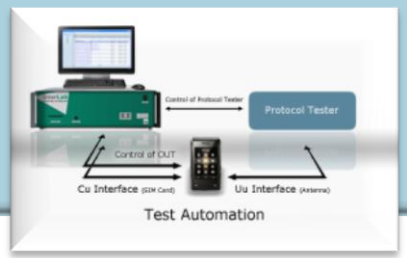
1st ever Bluetooth Low Energy product listing has been completed by 7Layers.

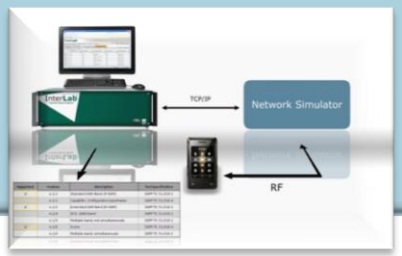
1st LTE smart phone tested and approved by 7Layers for Verizon Wireless network.

InterLab Test Solution LTE USIM/USAT wins Frost & Sullivan Best Practices Award 2011. **IL TS LTE USIM/USAT** has highest validation coverage worldwide for PVG and GCF verification and covers all Verizon wireless LTE certification.

7Layers is in the process of launching **InterLab LIVE,** the first ever online test plan generator for wireless devices. This way „Software as a Service" is becoming reality at 7Layers.

- **...and the 7Layers show is going on**





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