



Testing
Technologies

A Spirent Company



Testing Technologies

Vendors' Track, UCAAT 2015, Sophia Antipolis

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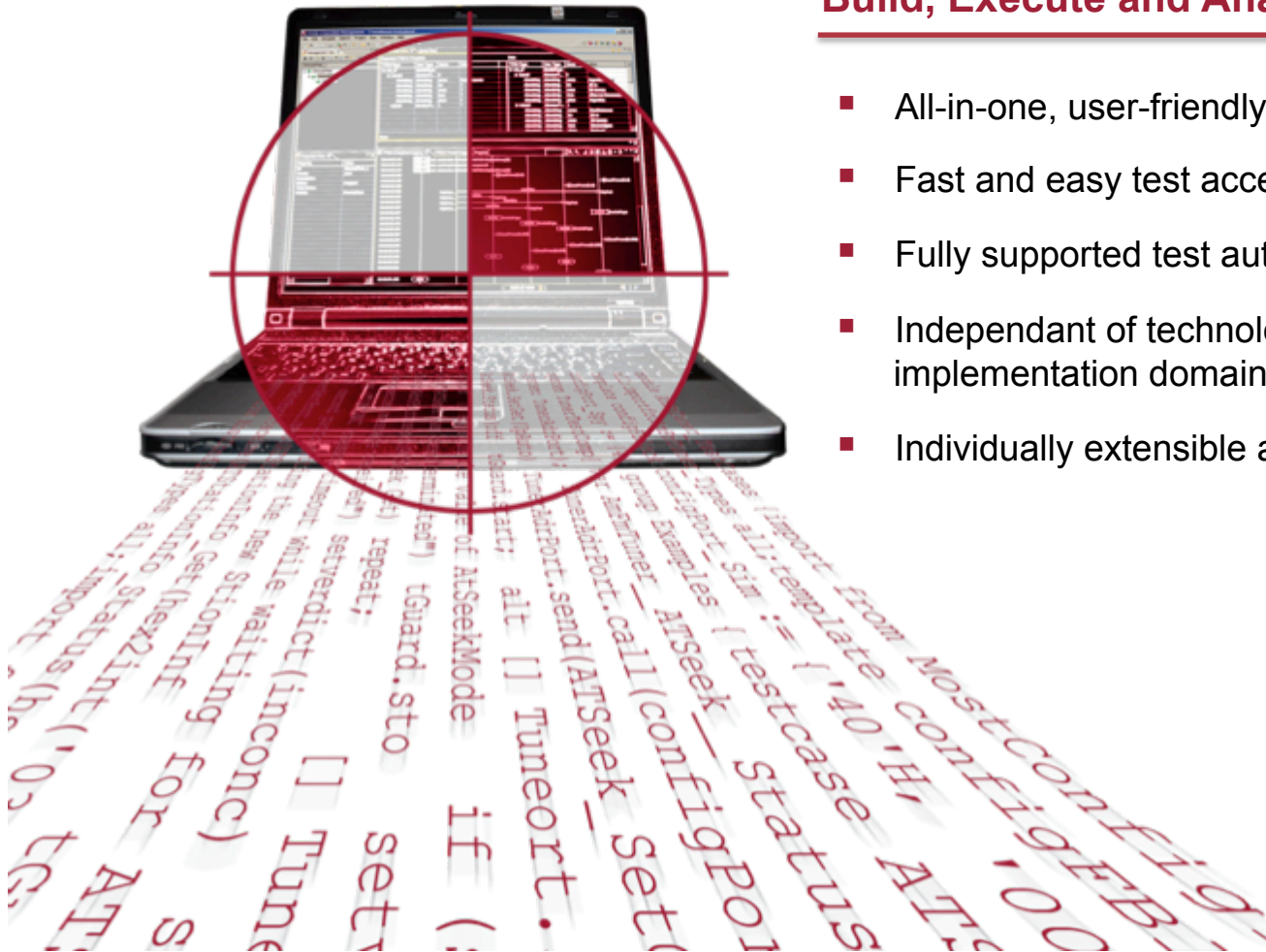
Testing Technologies

Being the one-stop shop for TTCN-3 tools and services.



Build, Execute and Analyze Complex Test Scenarios

- All-in-one, user-friendly development concept
- Fast and easy test access
- Fully supported test automation
- Independent of technology, operating system, and implementation domain
- Individually extensible and future-proven



Testing Technologies

The experts in test automation.



- Founded in 2000
- Spin-off of Fraunhofer Institute FOKUS
- Headquarter in Berlin, Germany
- > 30 employees (50% engineers)
- Since 2014 part of Spirent Technologies

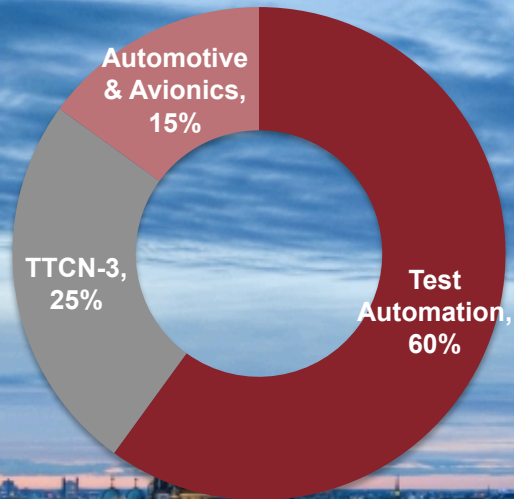


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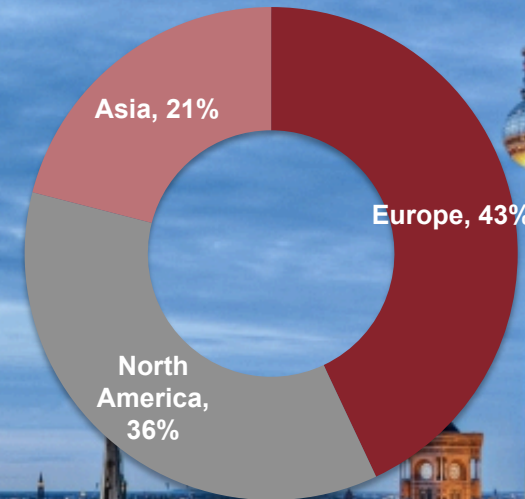
The experts in test automation.



Markets



Regions



- **Test Automation**
SmartHealth, Retail, Financial Services, Telecom
- **Traditional standards-driven TTCN-3**
3GPP, OMA, ETSI
- **Automotive and Avionics**

- **Our customers are global players with focus on QA**
- **Strong partner network worldwide**
- **More than 1.000 commercial installations**

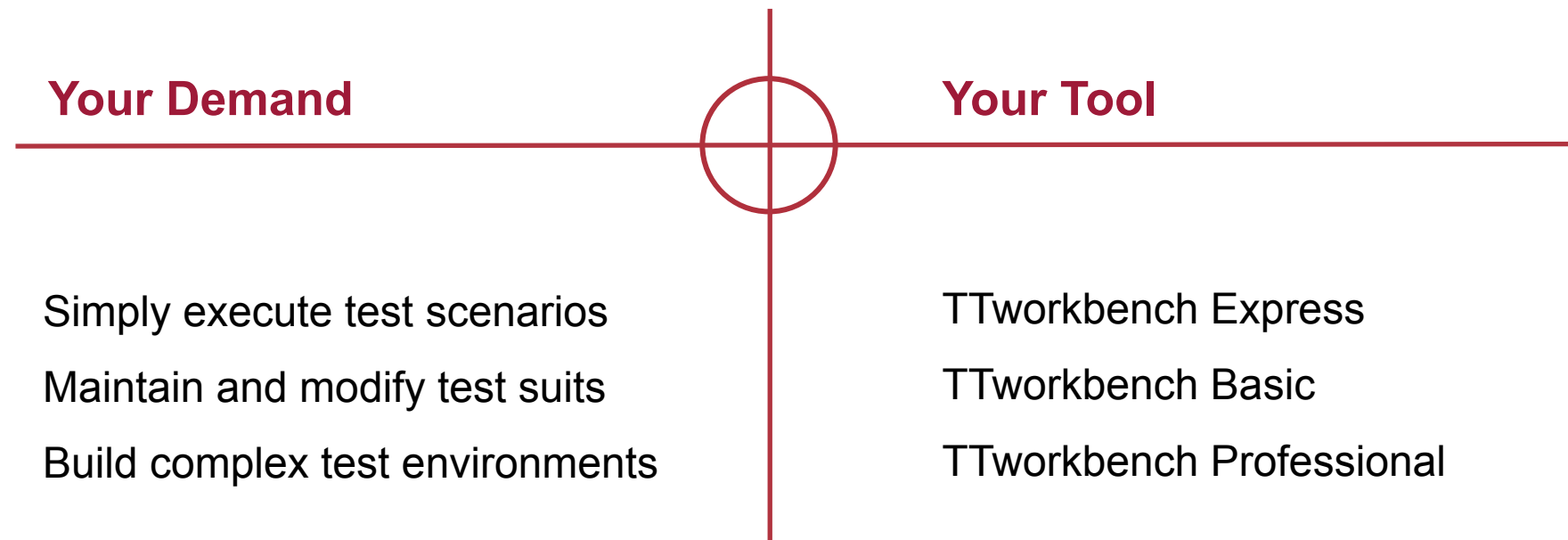
TTworkbench

The reliable test automation platform.



TTworkbench is the full-featured integrated test development and execution environment for any kind of test automation project.

It comes in three different product formats:



Testing Technologies

Business areas - products and services.



Test Automation

Test
Automation
Tools

Functional Test
Solutions

Test &
Professional
Services

Testing Technologies

Business areas - products and services.



Test Automation

TTworkbench
Express

TTworkbench
Basic

TTworkbench
Professional

Telecom

Automotive

Avionics

Training

Test System
Design

Test System
Development

Testing Technologies

Creating an automated testing bench - based on TT's Portfolio.



TTworkbench

The reliable, powerful test automation platform that scales with the needs.

Full-featured integrated development and execution environment for any kind of test automation project.

TTplugins

Easily extend the capabilities of TTworkbench.

Freely combinable test access for established and early-adopter technologies.

TTsuites

Application-specific test solutions for software products.

Off-the shelf, ready to use test applications.

TTworkbench

An impression of TTCN-3 tooling.



Developers Perspective for Modification

Test Execution

Test Campaign Designer (Test Automation)

Test Parametrization

Result Analyzer

Test Report

Online Logging, Filter, Reporting

TTCN-Type	User Type	Name	Value
record	Response	statusLine	
record	charstring	sipVersion	SIP/2.0
int	statusCode		200
record	charstring	reasonPhrase	?
set	MessageHeader	msgHeader	*
record	Accept	accept	*
record	AcceptEncod...	acceptEncod...	*
record	AcceptLang...	acceptLang...	*
record	AlertInfo	alertInfo	*
record	Allow	allow	*
record	Authenticat...	authenticat...	*
record	Authorizat...	authorizat...	*
record	CallId	callId	*
e...	fieldName	CALL_ID_E	
callIdStrin...	callId	364160127.0.0.1	

TTCN-Type	User Type	Name	Value
record	Response	statusLine	
record	charstring	sipVersion	SIP/2.0
int	statusCode		100
record	charstring	reasonPhrase	Trying
set	MessageHeader	msgHeader	*
record	Accept	accept	omit
record	AcceptEncod...	acceptEncod...	omit
record	AcceptLang...	acceptLang...	omit
record	AlertInfo	alertInfo	omit
record	Allow	allow	omit
record	Authenticat...	authenticat...	omit
record	Authorizat...	authorizat...	omit
record	CallId	callId	omit
e...	fieldName	CALL_ID_E	
callIdStrin...	callId	364160127.0.0.1	

Se...	Time	Message
0	09:11:35:332	Starting testcase SIP_CC_TE_CR_V_001
0	09:11:35:722	Testcase SIP_CC_TE_CR_V_001 started
0	09:11:37:054	Component #MTC_SIPP-1 sending
0	09:11:37:405	Timer MTC_TResp(5.0) started
0	09:11:37:495	Enqueuing message at #MTC
0	09:11:37:775	Enqueuing message at #MTC
0	09:11:37:965	message received by #MTC does NOT MATCH
0	09:11:38:076	Message received by #MTC MATCHES
0	09:11:38:356	message received by #MTC does NOT MATCH
0	09:11:38:406	Message received by #MTC MATCHES
0	09:11:38:877	Enqueuing message at #MTC
0	09:11:38:967	Message received by #MTC MATCHES
0	09:11:39:017	Timer MTC_TResp(1.602) stopped
0	09:11:39:087	Test event: MTC_setVerdict(pass)
0	09:11:39:097	Component #MTC_SIPP-1 sending
0	09:11:39:237	Component #MTC_SIPP-1 sending
0	09:11:39:327	Enqueuing message at #MTC
0	09:11:39:548	Timer MTC_TAck(5.0) started
0	09:11:39:638	Message received by #MTC MATCHES
0	09:11:39:688	Timer MTC_TAck(0.14) stopped
0	09:11:39:698	Test event: MTC_setVerdict(pass)
0	09:11:39:698	Testcase terminated with verdict pass

```
graph TD
    subgraph SYSTEM
        mtc
    end
    subgraph SIPP
        sipp
    end
    sipp -- INVITE Request --> mtc
    mtc -- TResp(5.0) --> sipp
    sipp -- ACK Request --> mtc
    mtc -- TResp(1.602) --> sipp
    sipp -- BYE Request --> mtc
    mtc -- TAck(5.0) --> sipp
    sipp -- TAck(0.14) --> mtc
    mtc --> pass
```

Why Testing Technologies?

7 good reasons for test automation with TTworkbench.



- 1** It significantly increases your system quality.
- 2** You can focus on what to test - not on how.
- 3** It reduces costs and efforts in test system maintenance.
- 4** There is no limitation regarding the access technology.
- 5** It supports communication between system development and test department.
- 6** You can count on available, trained and certified experts.
- 7** It is fun!

Testing Technologies

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Thank you very much for your attention!

**If you have any questions,
please don't hesitate to contact us.**

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