



Testing
Technologies

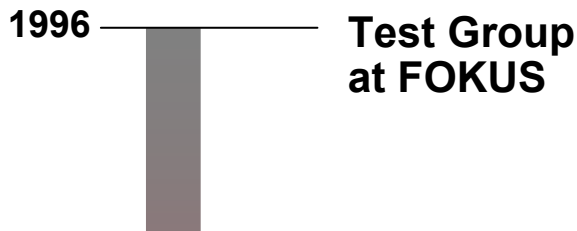
Make TTCN-3 happen!

Introducing TTworkbench as the TTCN-3 environment



Testing Technologies – Facts and Figures

1996 ——— Test Group
at FOKUS

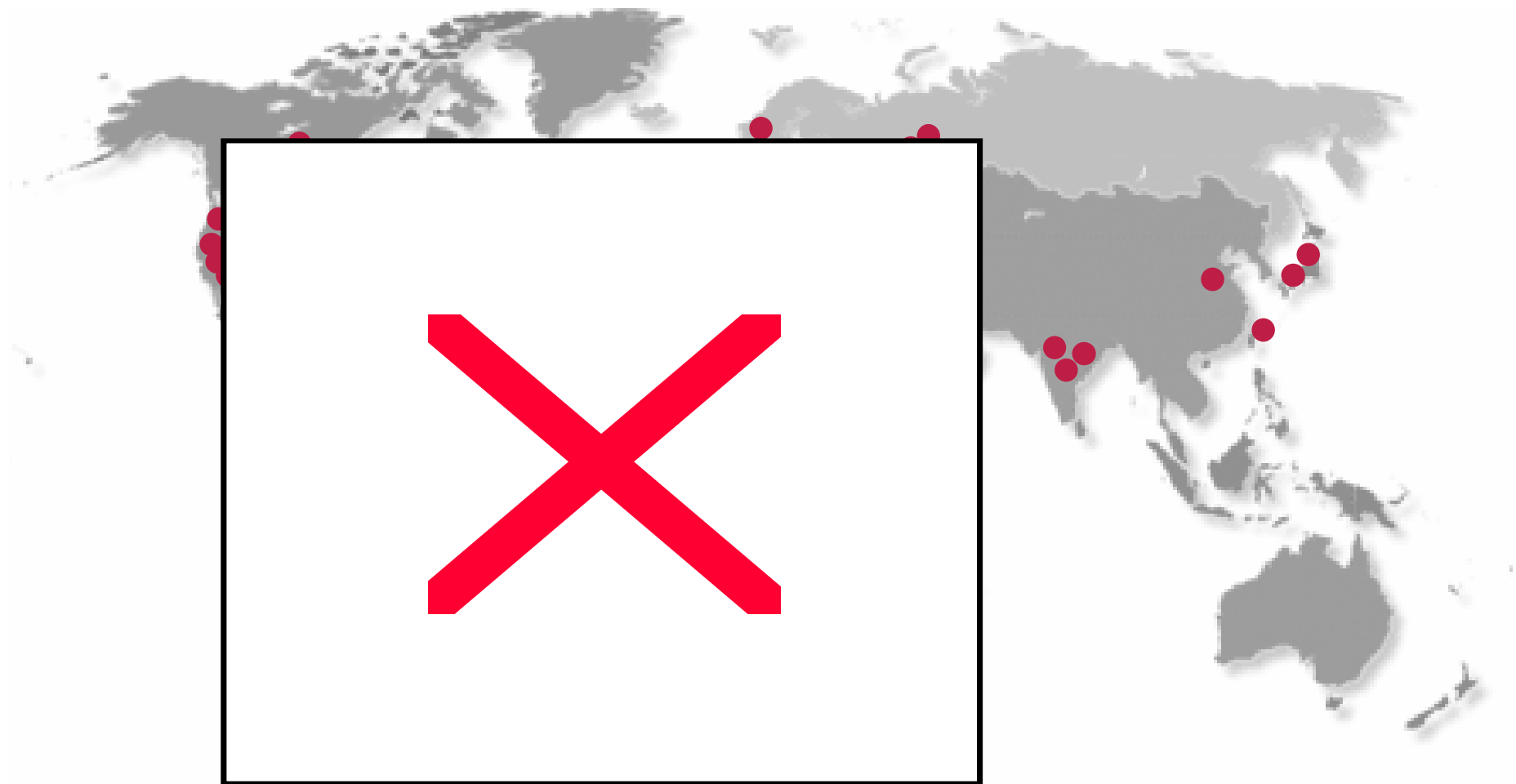


- Research Group Fraunhofer FOKUS
- Founded in 2000
- Headquarters located in Berlin, Germany
- 2000:
First commercial TTCN-3 environment → TTthree
 - ▶ **Compiler and Run-Time Environment**
- 2005:
First full TTCN-3 IDE → TTworkbench
 - ▶ **Editing, Compiling, Executing**
- 2007: Stable and world-wide deployed installation base

Testing Technologies

- Vision
 - ▶ Efficient and systematic testing
 - ▶ Test automation along the development life cycle
- Mission
 - ▶ To reduce your testing costs with ready-to-run test solutions
 - ▶ Test automation across technologies, development phases and types of testing
 - Increase your test quality by 100%
 - Reduce re-test costs up to 50%
 - Find errors first and locate their causes
- Task
 - ▶ Extended TTCN-3 development tool-set
 - ▶ Most advanced test suites and services

Customer Distribution



TTCN-3 in European Projects



ITEA ACHIEVEMENT AWARD 2005

This is to certify that the **TT-MEDAL project** has received this year's Achievement Award for outstanding contribution to the ITEA programme.

Project Leader
Colin Wilcock
NOKIA RESEARCH CENTER

Work Package Leaders
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VIT ELECTRONICS
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FRAUNHOFER FOKUS
Hannu Ryttilä
NETHAWK

The members of the ITEA Board consider *TT-Medal* as an excellent example of an efficient and effective project leading to impressive results with high potential for European industry. It is a step forward in ITEA's continuing efforts to leverage software and systems engineering improvements for increased software productivity in Europe, a major challenge to make our industries more competitive in the coming years for product and systems developments.

16th October 2005

Paul M. Mihring
Chairman of the ITEA Board

ITEA
INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

DAIMLERCHRYSLER



CONFORMIQ

<testing_tech>



ProRail



logica EMS

NOKIA
Connecting People



INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT



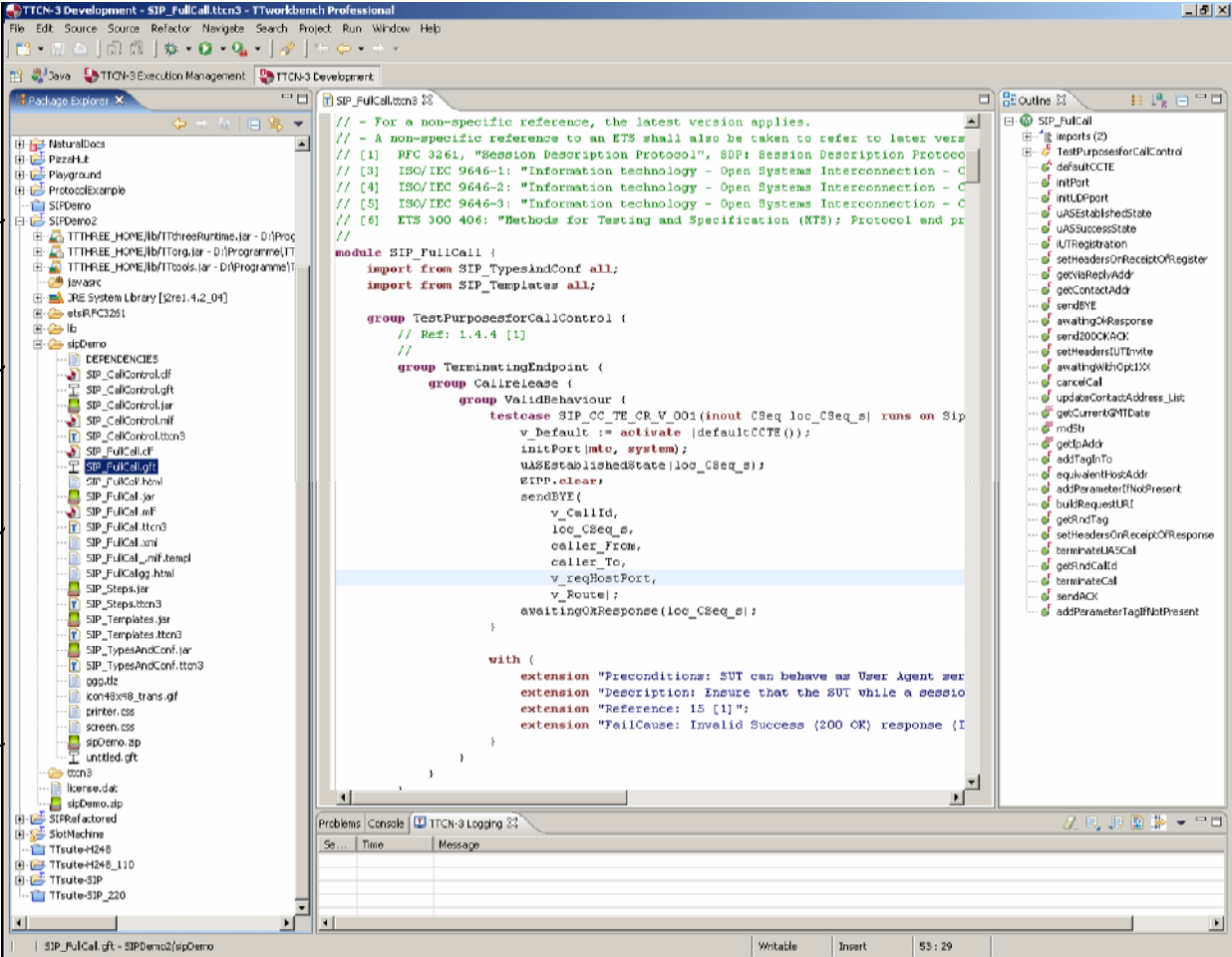
INFORMATION TECHNOLOGY FOR EUROPEAN ADVANCEMENT

and others ...

Why Testing Technologies?

- We live test automation with TTCN-3
 - ▶ We have been the first mover
 - ▶ We are continuously expanding our expertise in TTCN-3
- We make test automation work
 - ▶ Profit from our expertise
 - ▶ Find it captured in
 - The most productive test automation platform
 - Our powerful test solutions
- We are TTCN-3
 - ▶ Driving standards in the past and the future

TTworkbench – An Impression of TTCN-3 Tooling



The screenshot displays the TTworkbench Professional IDE interface. On the left, the Package Explorer shows a project structure for SIPDemo2, including source files and dependencies. The main editor window displays TTCN-3 code for a SIP test suite, featuring comments, imports, and test case definitions. On the right, the Outline pane lists the test suite's components, such as test purposes and test cases. At the bottom, the Problems and Console panes are visible, with the Console pane showing logging output.

Developers Perspective for Modification

Test Execution

Test Campaign Designer (Test Automation)

Test Parametrization

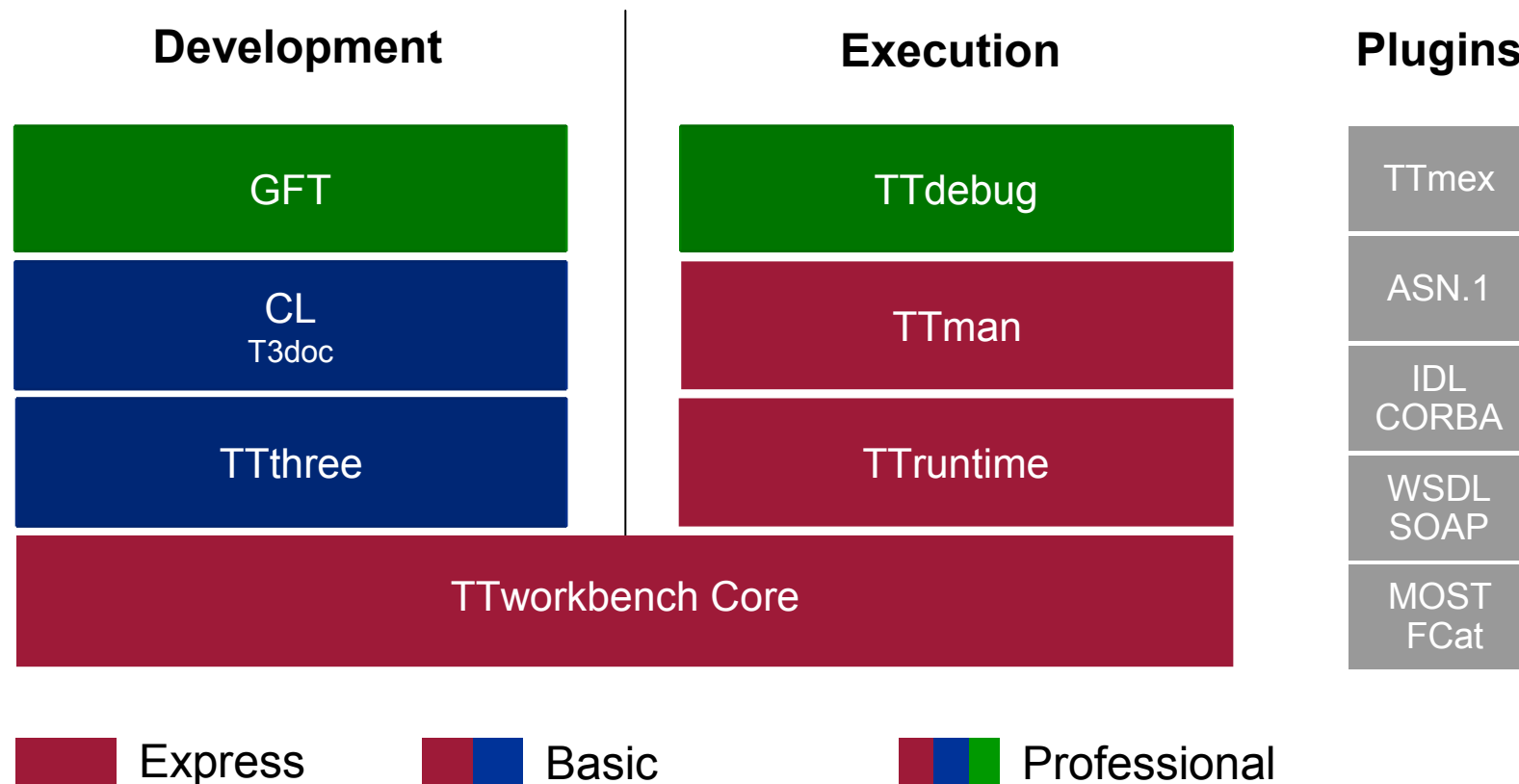
Result Analyzer

Test Report

Online Logging, Filter, Reporting

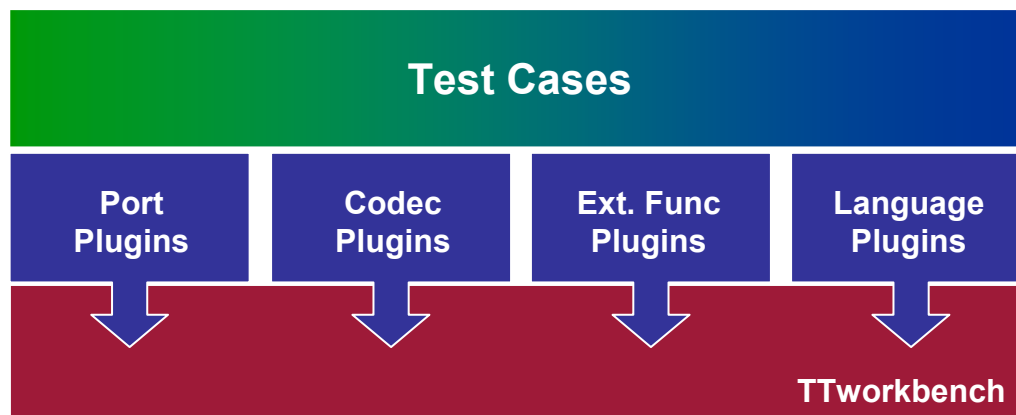
Scaling with the Needs

TTworkbench Releases



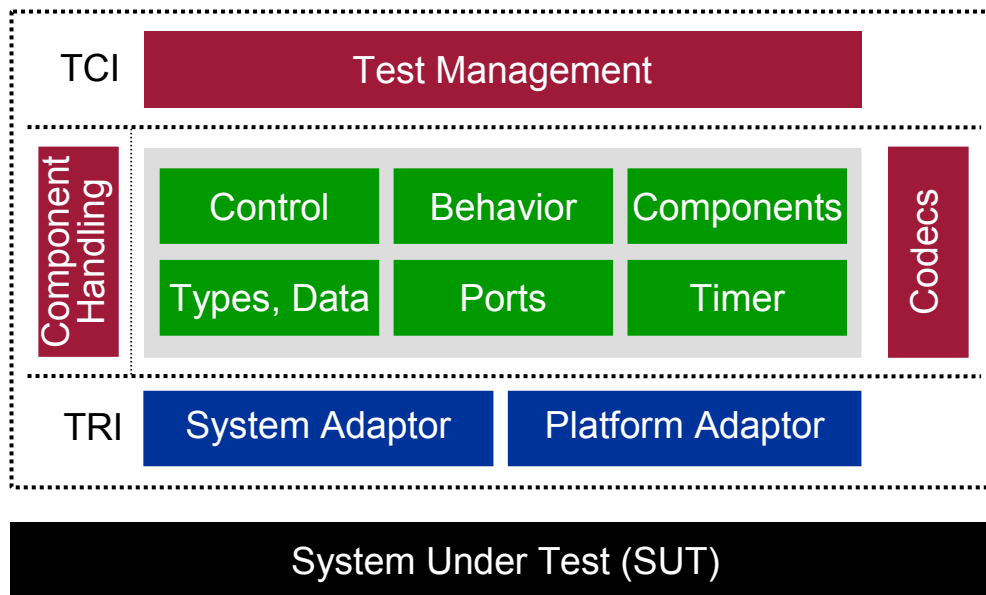
The TTplugin Concept

- TTworkbench plugins
 - ▶ For a particular access technology (port)
 - ▶ For a particular protocol (codec)
 - ▶ To perform partial external tasks (Ext Funct)
 - ▶ To import additional languages
- Test suites can use these plugins



TTCN-3 Reference Implementation Architecture

Future-Proof Investments



- ✓ Standardized
- ✓ Adaptable
- ✓ Portable
- ✓ Flexible
- ✓ Scalable

Adaptation to:

- ✓ Test Management and Execution (local/distributed) ⇒ TCI
- ✓ System Under Test ⇒ TRI
- ✓ External Data Representation ⇒ TCI

What's Next ?

- Testing Technologies profits from Open Source projects like
 - ▶ Eclipse
 - ▶ Apache
 - ▶ Etc.
- We are recognizing the relevance of open source projects and have decided to support such OS projects by helping to meet their claim of quality assurance.

The Community Program

- Projects that develop software that is put under an open source license model (e.g. OSI certified licenses)
- Testing Technologies offers TTworkbench
 - ▶ Express
 - ▶ Basic and/or
 - ▶ Professional
- To give OS projects a head-start in the area of test automation
- Apply for partnership at
 - ▶ community@testingtech.com

Your Path to Partnership

Do you qualify?

Are you an open source project?

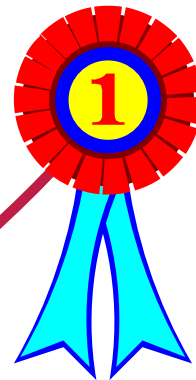
Do you want to use test automation?

Are you willing to release your test code?

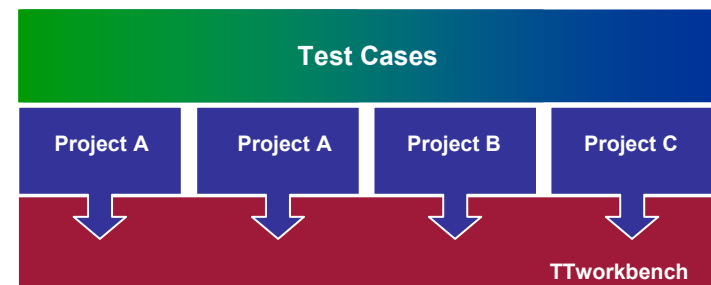
Application Phase

Send an informal application to Testing Tech

- Name and scope of the project
 - Website
- Contact person
 - etc.



Community Partner



The Community

- Codecs and System Adapters are the nuts-and-bolts of every TTCN-3 environment
 - ▶ Full support of TRI for System Adapters
 - ▶ Full support of TCI for Codecs
- GUI and Command-Line test execution
- Open-Source Plugins for Open-Source Projects!

THANK YOU!

Questions?