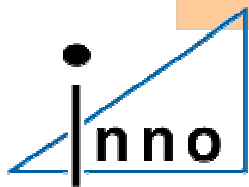# *Open-source TTCN-3 platform demo*

4th e-Infrastructure Concertation

6 December 2007

Motivations (I): The need for IPv6 Conformance Testing

- Interoperability was one of the most important reasons for IPv4's success and is a key feature of IPv6

- Conformance Testing can provide a first step towards ensuring interoperability and can be also helpful in identifying and resolving interoperability issues

Motivations (II): State of the Art

- Conformance Testing solutions for IPv6 exist and are available, but
  - Interoperability-oriented and less formal (e.g. TAHI)
  - Proprietary or linked to large tool chains
- TTCN-3 ATS for IPv6 exist and are available for free
  - Follow ISO-9646 methodology
  - Large coverage of IPv6
  - Validated by ETSI STF 276
- No freely available execution environment makes purchase of commercial tool compulsory for execution
- Existent tools are TTCN-3 Development Tools in the broader sense, i.e. IDE, Execution Environment, Test management etc.

Motivations (III): Immediate Objectives

- There is a need for **Low-Cost and "Open" TTCN-3 based IPv6** Conformance Tests

- IPv6 conformance verification services based on those tests would be very helpful for organizations not willing or able to setup own test bed

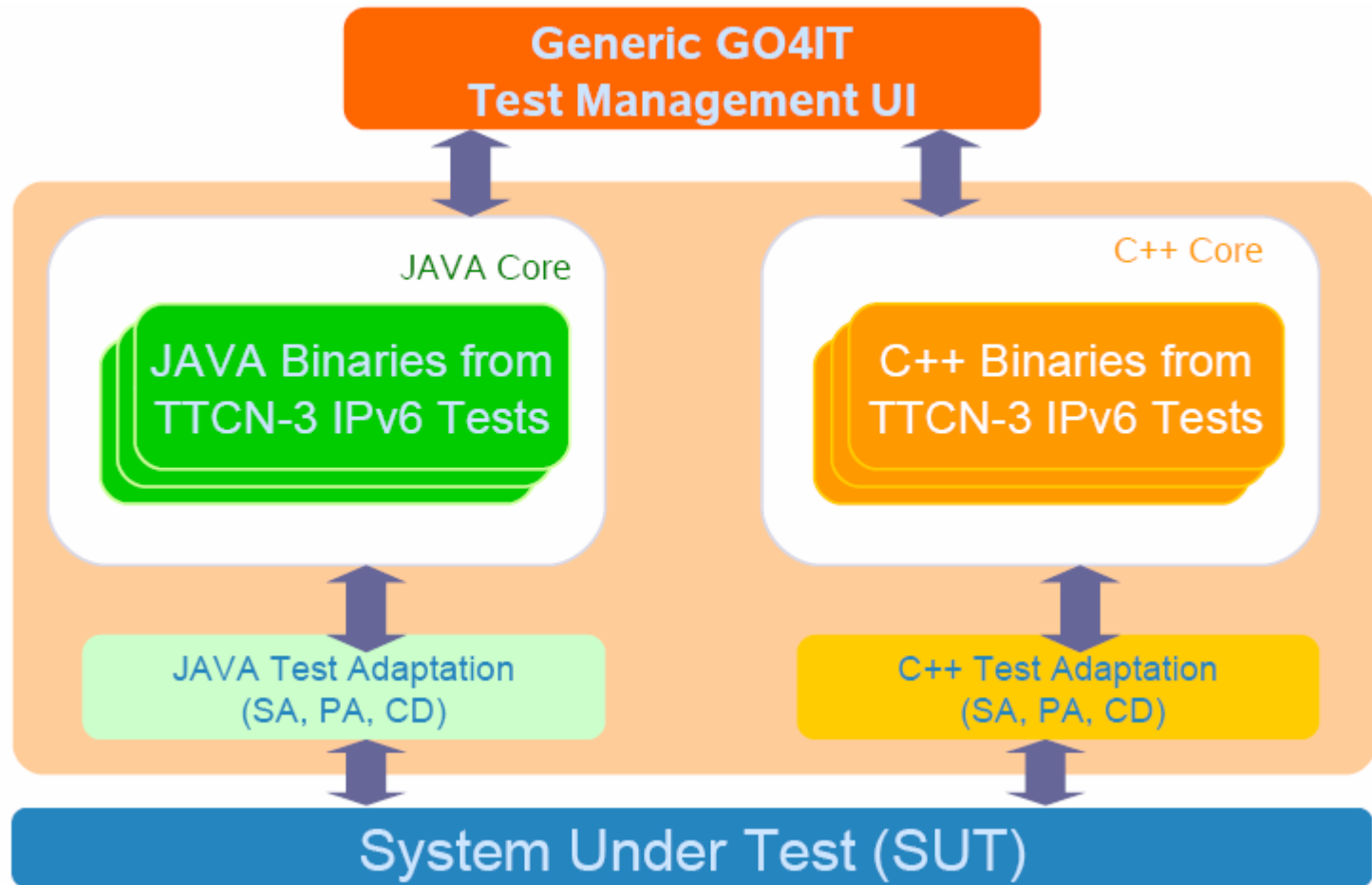- Go4IT project addresses both issues as Immediate objectives

Motivations (IV): Long-Run Objectives

- Sometimes, possibility of modifying existing tests or developing new ones might be required.

- GO4IT market analysis also identified need for free or low-cost TTCN-3 test development tools
  - TTCN-3 compiler
  - TTCN-3 editor/IDE
  - TTCN-3 CoDec generator

- GO4IT Long-run roadmap
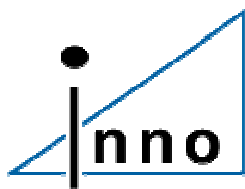 - Provide an open-source TTCN-3 test development environment

Architecture of the test system

Generic GO4IT Test Management UI

JAVA Core

JAVA Binaries from TTCN-3 IPv6 Tests

C++ Core

C++ Binaries from TTCN-3 IPv6 Tests

JAVA Test Adaptation (SA, PA, CD)

C++ Test Adaptation (SA, PA, CD)

System Under Test (SUT)

Achievements and Perspectives (I)

- Generic architecture to support different platforms (JAVA, C++)

- Open TTCN-Standard (TRI/TCI) Compliant Test Execution environment

- Integration of UI-Implementations with Test Execution Environment successful

- Showcase demonstrating openness of Architecture
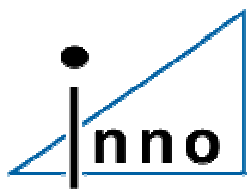
- Windows and Linux supported

Achievements and Perspectives (II)

- **Graphical and Command-Line Test Management User Interfaces with following features:**
  - Test campaign managment
  - Test Parameters management
  - Test Execution Control
  - Test Logging
    - Graphical/Textual
    - Online/Offline
- **Test Results Reporting**
- **Test Verdict Analysis, Test Data Analysis**

Demo

Outlook: Beyond GO4IT Project

- **The introduction of IPv6 creates new challenges and chances for application layer architectures and protocols (SoA, IPTV, IMS)**
  - E.g. New use cases
- **(TTCN-3)Testing for such architectures and protocols on top of IPv6 stacks is still new R&D field.**
- **Introducing distributed and parallel testing in the Go4IT platform would allow to target new fields such as Grids and applications**
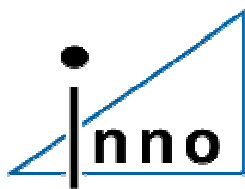
Welcome to join us !

Go4IT offers different levels of user participation enabling you to contribute according to your specific interests and competencies.

Involvement can be from "being aware" right up to "active contribution".

↘ **Be informed**: share aims and results while accessing for free the full services offered by the Go4IT project and having the opportunity to give your feedback … *Go4IT forum*

↘ **Contribute**: Get privileged access to private information and tools and participate in technical and dissemination activities … *Go4IT factory*

↘ **Coordinate**: ensure the project deliverables remain aligned to the overall objectives of Go4IT and the interests of individual contributors…*Go4IT consortium*

http://www.go4-it.eu

Thank you for your attention

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