

**PII – Pan-European
Laboratory Infrastructure
Implementation**

www.panlab.net

Scope and objectives

PII addresses the need for large-scale testing facilities in the telecommunications area by implementing an infrastructure for federating testbeds. The PII project uses the concept of European innovation clusters and builds on the existing testbeds that are supporting scientific and technological endeavour

within these clusters. The central objective of PII is to create a testbed federation among these regional innovation clusters in Europe. This will enable companies participating in these clusters to test new telecommunication services and applications across Europe.

About the innovation clusters

The PII testbed federation includes four core and three satellite innovation clusters (figure 1). The core cluster nodes constitute fully operational test network infrastructures that are today able to

provide testing services. The satellites are tasked to prepare for local innovation clusters with the objective of connecting these clusters to the federation.



Figure 1: PII federation – core and satellite innovation clusters

Technical and innovation approach

PII will develop and deploy effective mechanisms and technologies to enable a functioning federation of existing testbeds. This will provide added value to users of existing local testbeds, and it will prove that federation is a model for the establishment of a long-term sustainable, large-scale and diverse testing infrastructure for telecommunications technologies, services and applications in Europe.

In particular PII will:

- develop mechanisms and tools to describe, store, locate and orchestrate testing services as well as means to automatically provide composite testbeds across multiple administrative domains.
- develop and elaborate mechanisms to combine and accommodate future clean-slate approaches and provide testing services in a network-agnostic manner.
- define a common control framework, which enables the interconnection of diverse testbeds.
- establish trust across the federation by means of quality assurance processes and tools.
- integrate the concept of user-driven innovation.
- execute a techno-socio-economic study to assess the long-term sustainability of the federation model.

PII's testbed federation infrastructure builds on the legal, operational, and technical framework developed by the Panlab support action in FP6. The PII testbed federation concept is shown in figure 2. The network domains are represented by testbeds that are provided by the PII partners, which offer certain services and components depicted by the circles A, B, C and D. The central federation control unit is represented by Teagle, a dedicated web-based tool for federated testing.

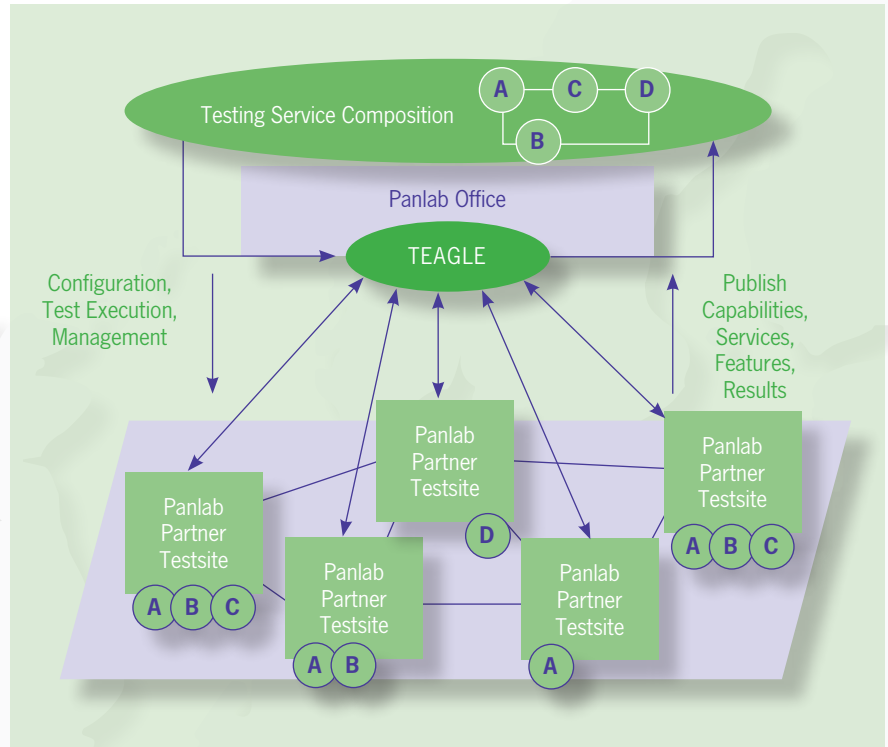


Figure 2: PII testbed federation concept

Target users and benefits

The stakeholders who can benefit from the federation of testbeds are effectively all stakeholders involved in the value chain for telecommunications services and applications. Smaller organisations can benefit from federation by compensating their lack of financial resources to deploy own testing infrastructures. However, even among larger stakeholders there is a trend not to deploy and operate expensive testbeds. Thus, the beneficiaries of testbed federation are:

- SMEs involved in communication systems, application and service design and development. Typically, SMEs do not have access to real communication platforms to test their products.
- Large corporations, like terminal and network components vendors, can test their new products and gather end-user experiences through experimentation on open platforms incorporating as many up-to-date network technologies and users as possible. The

main added value for these stakeholders is the diverse environment that can be enabled through federation.

- R&D work in universities and other academic institutions involved in the engineering of new communication protocols and services which, in their validation phase, must be somehow mapped on real network settings in order to be tested and quantified in terms of performance and qualified in terms of interoperability.
- Real end-users who get connected on an integrated platform and gather personal experiences concerning new applications.

In many cases, stakeholders who need large scale, diverse testing environments are organised in collaborative projects within large R&D programmes, such as EC Framework Programme 7, EUREKA cluster Celtic as well as national ICT programmes.

PII – open for federation partners

PII's federation is open, which means that any partner who operates a testbed can connect to the federation and offer testing services or other support services through PII. Connecting to the PII federation requires partners to agree to the principles of the federation framework.

Contact PII for more information on the principles as well as the terms for joining the federation.

Project partners

Eurescom Germany
DIMES Association Finland
Oulu Innovation Finland
Nokia Finland
EICT Germany
Deutsche Telekom Germany
Fraunhofer FOKUS Germany
Association Images & Reseaux France
Thomson R&D France
France Telecom France
Industrial Systems Institute Greece
University of Patras Greece
COSMOTE Greece
BlueChip Technologies Greece
Waterford Institute of Technology Ireland
Lulea Tekniska Universitet Sweden
Telefónica I+D Spain
Alcatel-Lucent France
Italtel Italy
Universita degli studi di Palermo Italy

Project Information

Type of project
Large-scale integrating project

Grant agreement number: 224119
Total project cost: 8.4 million euro
EC contribution: 5.7 million euro

Project coordinator
Eurescom GmbH
Wieblinger Weg 19/4
69123 Heidelberg
Germany

Project website
www.panlab.net

Project start date: 1 June 2008
Project duration: 30 months

Contact

Project co-ordinator
Anastasius Gavras
Eurescom GmbH
Phone: +49 6221 989-0
E-mail: gavras@eurescom.eu

Press enquiries
Milon Gupta
Eurescom GmbH
Phone: +49 6221 989121
E-Mail: gupta@eurescom.eu

About PII

The "Pan-European Laboratory Infrastructure Implementation" (PII) is a large-scale integrating project of the European Union's 7th Framework Programme in the thematic priority Information and Communication Tech-

nologies. It addresses objective 1.6, "New Paradigms and Experimental Facilities", within Challenge 1, "Pervasive and Trusted Network and Service Infrastructures."

About EU Framework Programme 7

The EU Framework Programme 7 (FP7) has two main strategic objectives: (i) to strengthen the scientific and technological base of European industry; and (ii) to encourage its international competi-

tiveness, while promoting research that supports EU policies. More information about FP7 is available at <http://cordis.europa.eu/fp7>

PII receives research funding from the European Commission in the EU Framework Programme 7. Apart from this the European Commission has no responsibility for the content of this flyer. This flyer may contain forward-looking statements relating to advanced information and telecommunication technologies. Neither the PII project nor the European Commission accept any responsibility or liability for any use made of the information provided in this flyer.