

Use cases for PII testbed federation

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Federation of testbeds

- ▶ Interconnection of two or more independent testbeds for
 - Creation of a richer environment for testing and experimentation
 - Increased multilateral benefit of the users and providers of the individual testbeds
- ▶ Geographically disperse
- ▶ Technologically diverse
- ▶ Owned by different organisations (administrative domains)
 - However, considered as being part of a **single resource**
- ▶ Common management framework under a common management authority
- ▶ Dynamic and evolve over time based on the **requirements of the users**

Federation of innovation clusters

- ▶ PII innovation clusters are ecosystems which function as incubators of innovation
- ▶ PII federates innovation clusters that exhibit the following common properties:
 - Regionally active – Thematically focused – Backed by large corporations
 - Bring together SMEs, large corporations, academic institutes and other organisations (e.g. early adopter users)
 - Operate testbeds as innovation supporting infrastructures
 - Organisational structure provided by an SME or an association
 - Looking for opportunities to exploit the European dimension

Template for use cases

- ▶ Targeted users
 - Actors, stakeholders and their interests
- ▶ Description
 - Interfacing with the (testing) user
 - Platform setup
 - Results acquisition
- ▶ Expected impact
 - Research on the future Internet (FIRE, GENI...)
 - Future ICT and telecoms market
 - Evolution of the FIRE facility

Use cases – Class 1

- ▶ **Outsourced Testing and Testbeds** – covering generic outsourced testing applications, including business economic view of savings and combined synergies instead of self-contained testbeds
 - Outsourcing of testbed environments

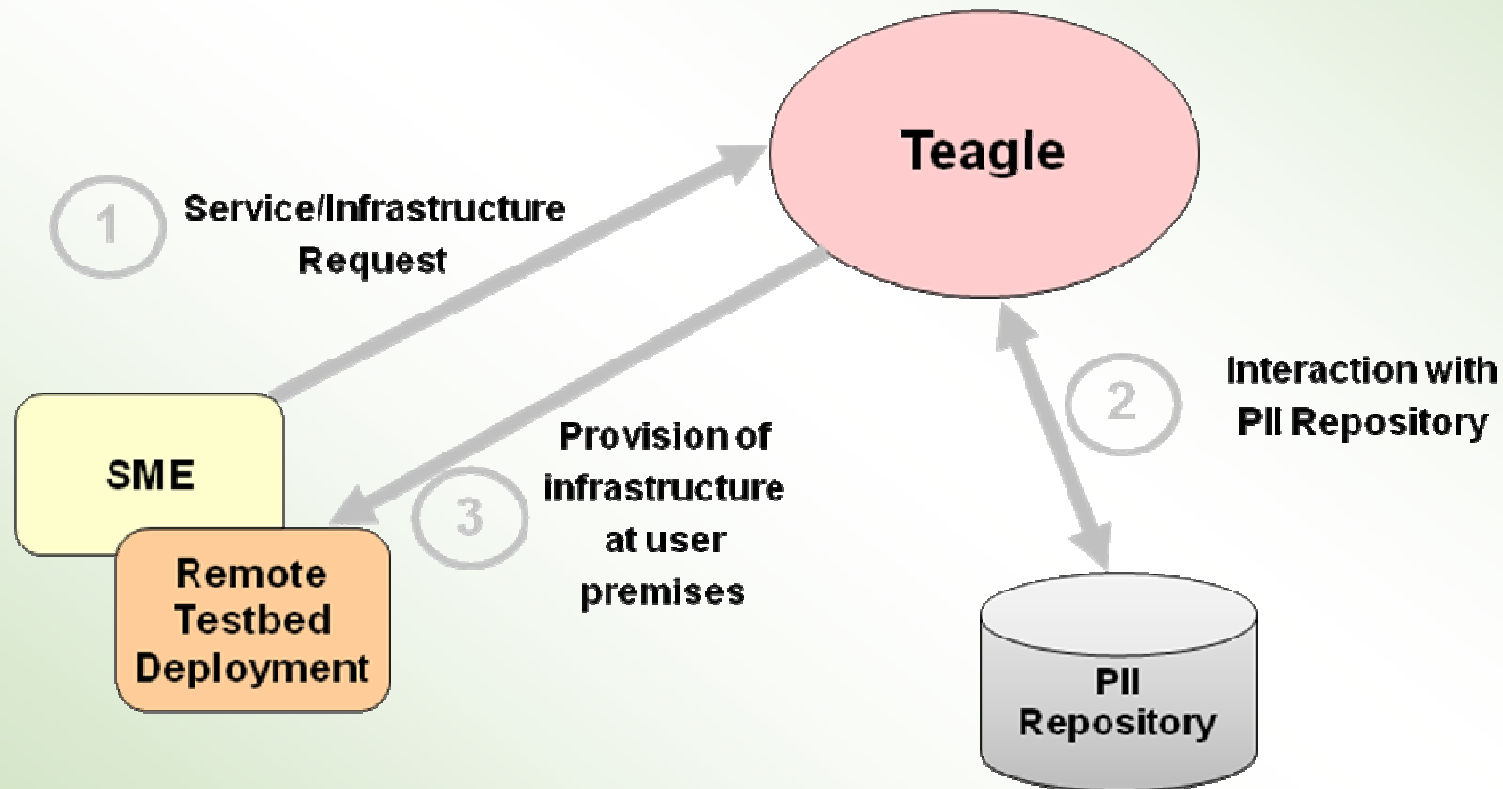
Use cases – Class 2

- ▶ **Test of Services and Applications** – containing the main technical cases of testing technologies, services, networks, protocols and other user driven innovations
 - Concurrent testing
 - User driven innovation

Use cases – Class 3

- ▶ **Conformance, Interoperability and Certification** – addressing a three-step workflow to guarantee quality of testing and results
 - Service continuity in fixed mobile access networks
 - Re-use of test suites
 - Reuse of Testing Tools
 - Certification Process

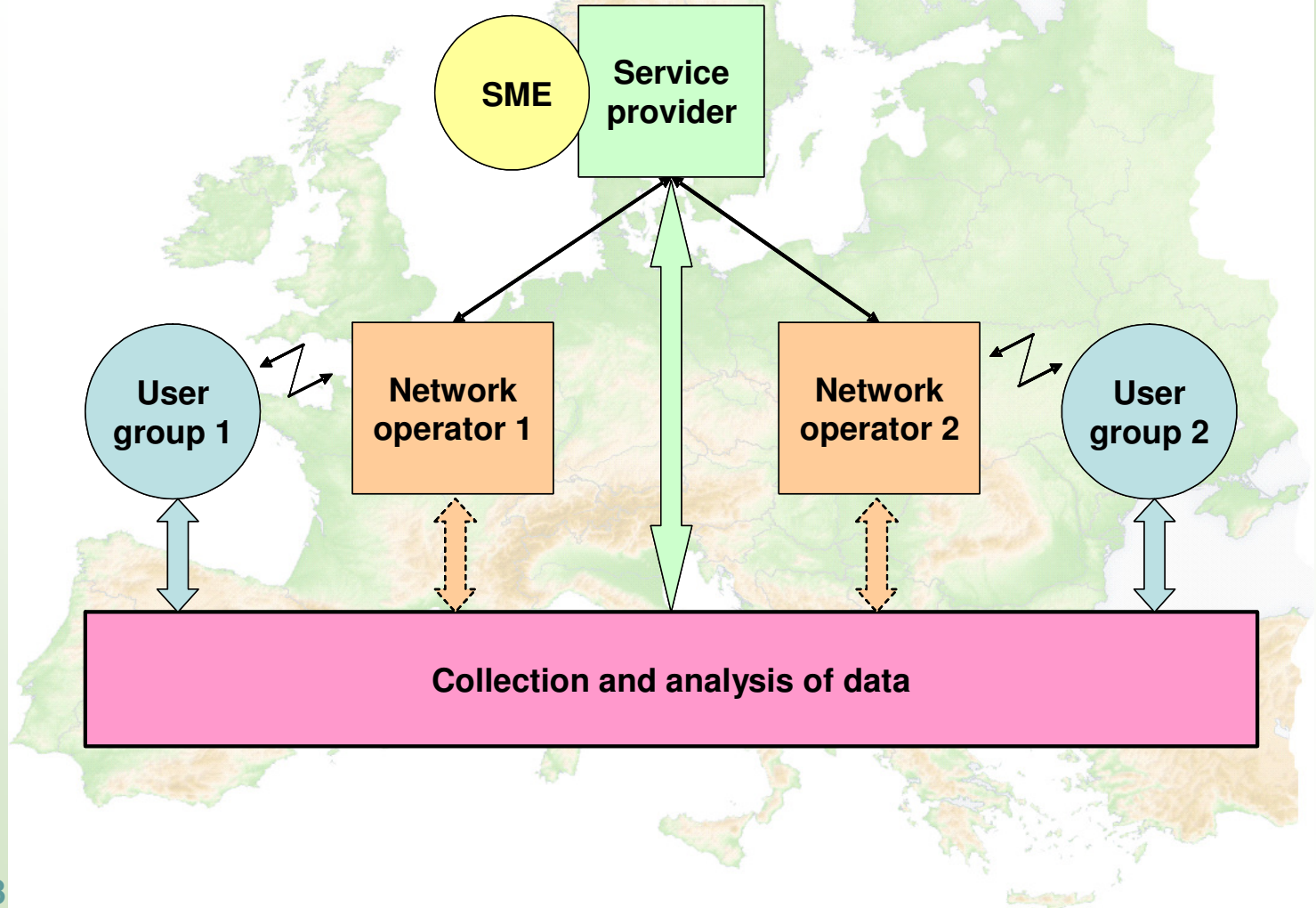
Class 1 – Remote deployment



Class 1 – Properties

- ▶ Pre-configured standard testbeds
 - Highly reproducible
- ▶ Easy deployment
- ▶ Easy protection of IPRs (on results)
- ▶ High suitability for automation

Class 2 – Concurrent testing



Class 2 – Description

- ▶ Information service, with geographically localized information on a mobile device
 - restaurants and hotels addresses and characteristics, museum and tourism information, market places, shopping centres, doctors and drugstores, ...
- ▶ The objective of the concurrent testing is to evaluate the potential extension of the service to new markets, by a live experience with different user groups
 - Behaviour and expectation of the end user varies by country
 - Identify the needed adaptation of the service content for the envisaged target market

Class 2 – User Driven Innovation – Why?

▶ Societal trends

- People are becoming more technologically knowledgeable. A new generation of young people are online for at least one third of their life before joining the work force.
- New, simpler technologies are giving every user the skills of creating and changing online content and software.

▶ Collaboration

- People are active in developing knowledge through collaboration

▶ Social interaction

- People expand their social circles

▶ Personalization

- Target small niche segments effectively and profitably

▶ Active participation

- End-users contribute and share their perspectives

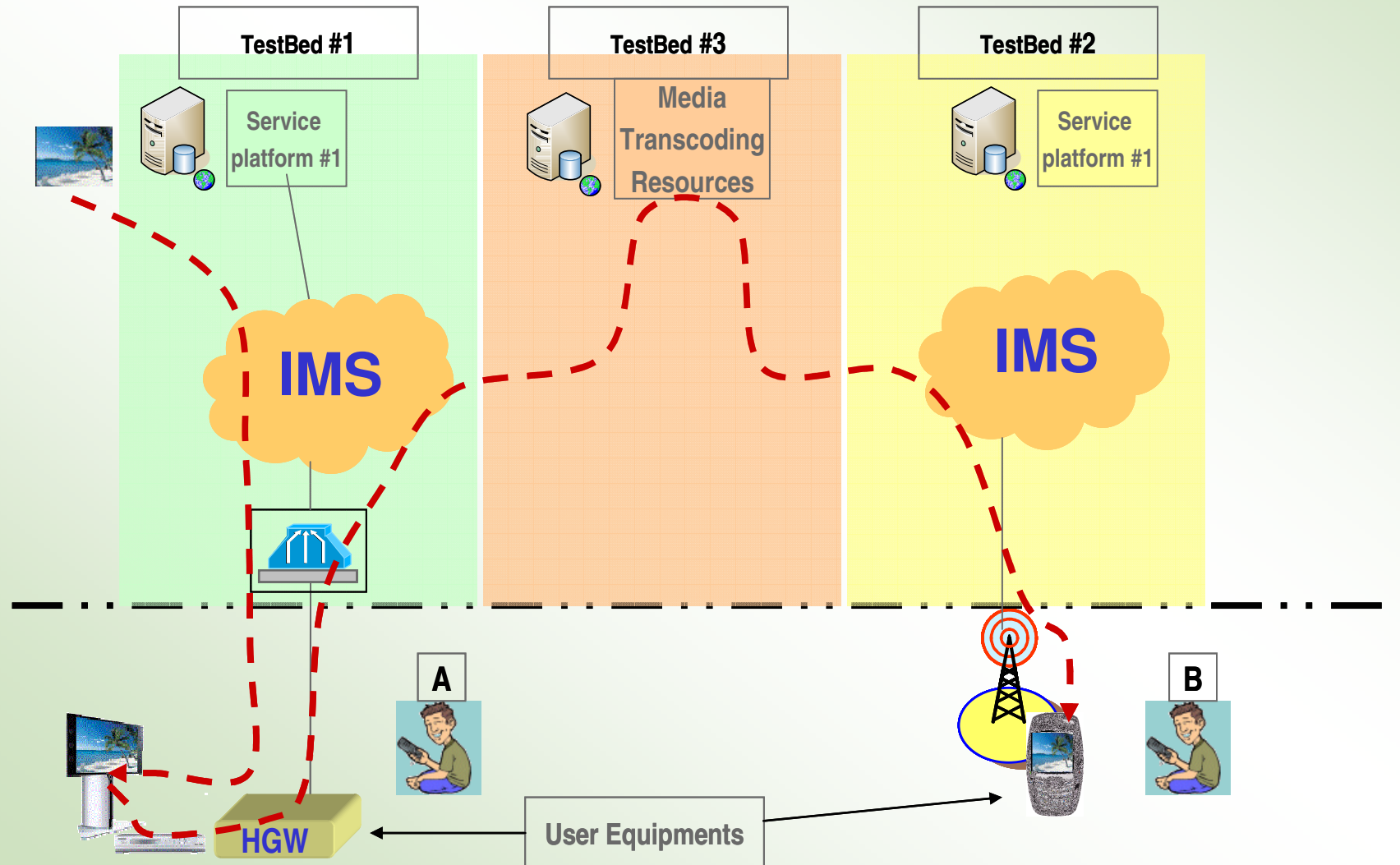
▶ Communication devices

- A growing number of devices enable communication

Class 2 – UDI – How?

- ▶ Include the end-user in the full innovation process
 - Brainstorming
 - Conceptualisation
 - Delivery of useful services
- ▶ Allow end-users access to the testbeds
 - Invite them to a dialogue on their needs, wishes and habits of use of technology
 - Give them the tools so that they can create something new and relevant
- ▶ Exploit “beta culture” → “Fail fast, fail cheap!”

Class 3 – Service continuity testing



Class 3 – Service continuity

- ▶ Interoperability with adaptation between heterogeneous technologies
- ▶ QoS allocation algorithms
- ▶ Network protocols
- ▶ Network functions
 - Handover
 - Roaming
 - Addressing schemes

Contact and further information

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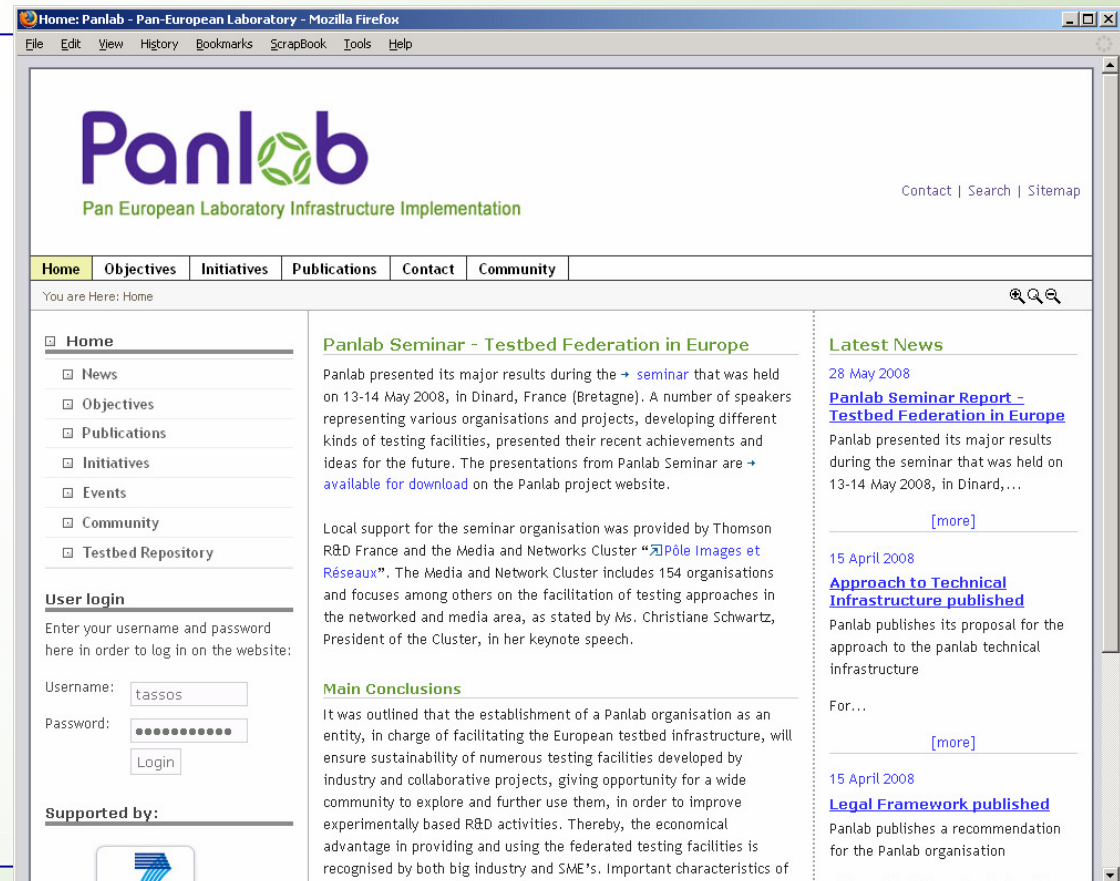
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Panlab Seminar - Testbed Federation in Europe

Panlab presented its major results during the → [seminar](#) that was held on 13-14 May 2008, in Dinard, France (Bretagne). A number of speakers representing various organisations and projects, developing different kinds of testing facilities, presented their recent achievements and ideas for the future. The presentations from Panlab Seminar are → [available for download](#) on the Panlab project website.

Local support for the seminar organisation was provided by Thomson R&D France and the Media and Networks Cluster “[Pôle Images et Réseaux](#)”. The Media and Network Cluster includes 154 organisations and focuses among others on the facilitation of testing approaches in the networked and media area, as stated by Ms. Christiane Schwartz, President of the Cluster, in her keynote speech.

Main Conclusions

It was outlined that the establishment of a Panlab organisation as an entity, in charge of facilitating the European testbed infrastructure, will ensure sustainability of numerous testing facilities developed by industry and collaborative projects, giving opportunity for a wide community to explore and further use them, in order to improve experimentally based R&D activities. Thereby, the economical advantage in providing and using the federated testing facilities is recognised by both big industry and SME's. Important characteristics of

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