

Panlab
Federating European
networking testbeds
Challenges and experiences

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Background - CELTIC

- ▶ The Pan-European Laboratory is a concept that is being introduced to enable the trial and evaluation of service concepts, technologies, system solutions and business models to the point where the risks associated with launching of these as commercial products will be minimised



Background – IST programme (1)

- ▶ To integrate and validate, in the context of user-driven large scale testbeds, the state-of-the-art technology that is essential for preparing future upgrades of the infrastructure deployed across Europe...
- ▶ The work is essential for fostering the early deployment in Europe of Next Generation Information and Communications Networks...
- ▶ Developing roadmaps and strategic guidance for infrastructure development in Europe...



Background – IST programme (2)

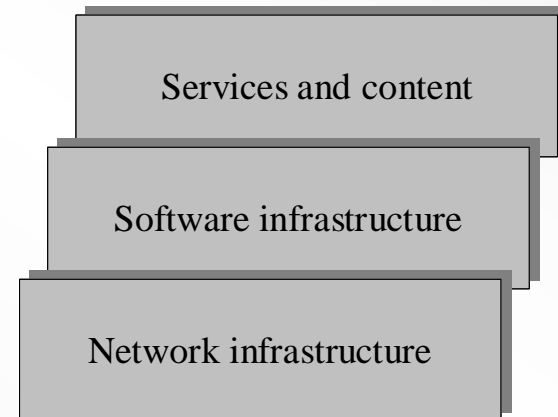
- ▶ ...contributing towards strengthening and enhancing the European initiatives on Research Infrastructures...
- ▶ ...to promote interoperability across heterogeneous technology domains, facilitate interoperability of solutions across different scientific and industrial communities...
- ▶ ...enhance, complement and exploit synergies with the relevant national and international initiatives...



Vision for Pan-European Laboratory

- ▶ Identify the long-term ICT industry requirements for end-to-end testing and present a plan and roadmap for how to satisfy such requirements in the long-term
- ▶ Based on the concept of federation of distributed test laboratories and testbeds that are interconnected and providing access to required platforms, networks and services for broad interoperability testing

- ▶ Provision of testing facilities for the big picture



What is Panlab

- ▶ A project (SSA) funded by the European Commission under FP6
- ▶ ... and which enables and facilitates the Pan-European laboratory vision

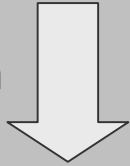
Project Panlab

- ▶ Distil long-term vision of ICT industry
- ▶ Develop roadmap for long-term Panlab operation
- ▶ Identify potential participants and customers
- ▶ Identify requirements of stakeholders
- ▶ Define and verify collaboration rules and mechanisms
- ▶ Collaboration tools

Pan-European Laboratory overview

Long-term ICT
industry requirements
for end-to-end testing

Mission



Project Panlab

Distil long-term
vision of ICT
industry

Develop roadmap
for long-term
Panlab operation

Identify potential
participants and
customers

Identify reqs.
of stakeholders

Define and verify
collaboration rules
and mechanisms

Collaboration tools

Results



Accepted legal,
organisational,
operational,
and economic
framework

Activities



Main phases of the Panlab

- ▶ Vision phase:
 - Production of a “Common Technology Vision”
- ▶ Definition phase
 - Detailed definition of the Panlab
 - **Technical infrastructure**
 - **Legal requirements**
 - **Operational conditions**

Definition: Technical infrastructure

- ▶ Testing process definition
- ▶ Establishing a catalogue of components
- ▶ Specification of testbed lifecycle
- ▶ Secure remote access to the testbeds
- ▶ Scheduling of the resources
- ▶ Procedures for analysis and diagnostic
- ▶ Troubleshooting and fault management
- ▶ ...

Definition phase: Legal issues

- ▶ Definition of terms
- ▶ Intellectual property rights
- ▶ Confidentiality issues
- ▶ Conflict resolution
- ▶ Handling procedures in case of misusing rights or neglecting obligations
- ▶ ...

Definition: Administrative and operational conditions

- ▶ Define the operational processes that need to be in place and that allow for a precise description of steps to grant access to remote assets and resources, and to identify responsibilities, rights and obligations, as well as problem resolution guidelines
 - Stakeholders
 - Roles
 - Relationships between roles
 - Administrative domain
 - Contract
 - Reference point
 - ...

Target

- ▶ A successful Panlab leaves a self-sustainable, long-living, and well-functioning legacy of guidelines, principles and rules allowing the implementation of the Pan-European telecommunication test laboratory. This laboratory combines a set of high-quality testbeds and laboratories in Europe and worldwide, the activities of which are widely known, highly valued and guaranteed for the customer.

Value proposition

- ▶ Panlab assures the visibility of the federation of laboratories
- ▶ The testing sites and testbeds become known and accessible for the potential customers
- ▶ Individual testing facilities gain valuable visibility and publicity by joining the Pan-European laboratory.

Collaborate and compete

- ▶ Standardised metrics for meaningful comparison of capabilities of independent testing sites
- ▶ Transparent classification and rating
- ▶ Induce incentives for competition
 - Maintain high quality of testing facilities
 - Always state-of-the-art
- ▶ Brokerage service for testing facilities
- ▶ Credibility and trustworthiness in handling confidential information

Enables and facilitates

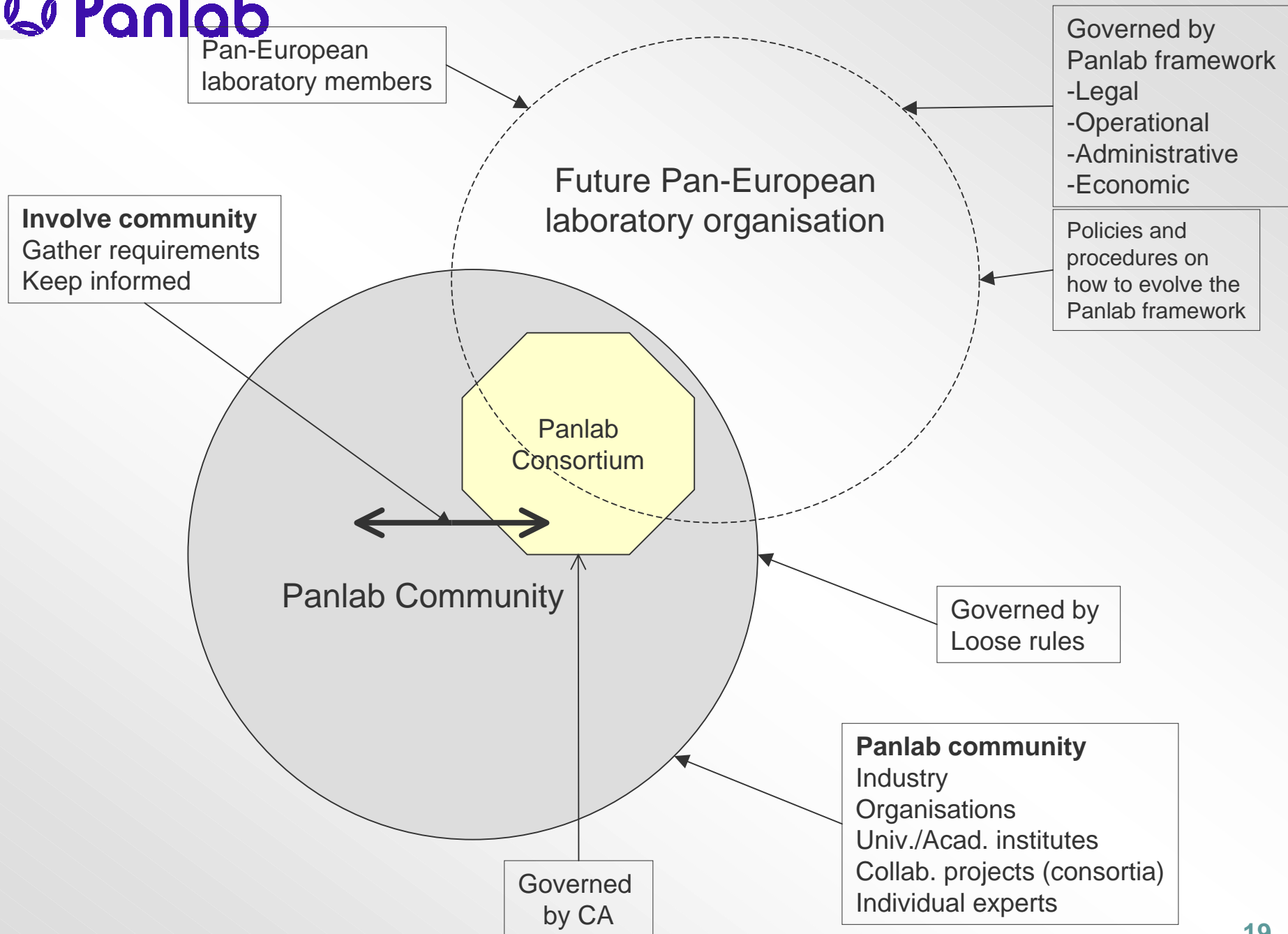
- ▶ Interconnection of the best laboratories to test specific systems or services
- ▶ Technology, system, and service integration in a European/global environment
- ▶ Technology and service validation/verification
- ▶ Ultimately ... certification of products

Long-term vision for operation

- ▶ Coordination of the activities by a centralised entity
- ▶ Continuous development of the facilities
 - Adding new available network and service platforms
 - New laboratories joining the federation
- ▶ Business entity offering services and continuing the activities

Important aspects

- ▶ Definition of resources
- ▶ Descriptions of testing processes
- ▶ Possibility for roadmap testing
- ▶ Scheduling of resources
- ▶ Availability, transparency of restrictions
- ▶ Economic model, transparent pricing
- ▶ Marketing
- ▶ Development of a “community”



Current activities

- ▶ Consolidating Vision for ICT (D1.1)
 - Ecosystem of technological programs
 - Areas and Directions
- ▶ Developing Vision for Panlab (D1.2)
 - Pan-European laboratory definition
 - Potential partners/customers
 - Pan-european laboratory competitive positioning
 - General infrastructure requirement
 - Required enabling mechanisms

Panlab –summary

- ▶ **Common Technology Vision** is a long-term Technology Roadmap and a Strategic Development Guideline for testing activities in European and global telecommunications
- ▶ **Stakeholders** are existing testing laboratories, testbeds, and collaborative projects in FP6, FP7, Eureka clusters and other international initiatives
- ▶ **Accepted framework** of legal, economic, administrative and operational rules that enable collaboration of testing laboratories and testbeds

Administrative details

- ▶ Panlab is a Consortium of 10 organisations
 - Eurescom (Coordinator) supported by CELTIC, France Télécom, Telefonica, Italtel, Thomson, Alcatel, Nokia, Fraunhofer Fokus, DIMES, RAD, École de technologie supérieure
- ▶ Is supported by the EC as an SSA under FP6
 - Budget: 1.3 Mio. €
 - Effort: 134 Person-months
 - Start: June 2006
 - Duration: 24 months



Thank you

Questions?

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