

Objective ICT-2011.10.1 EU-Brazil Research and Development cooperation

ICT NCP Infoday

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Topic (c) Future Internet - experimental facilities

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Topic (c) Future Internet - experimental facilities

EU and Brazil collaboration on experimental facilities for the Future Internet:

- Builds on projects and infrastructures well developed in Europe and Brazil
- Leverages on the leading role of Brazil in Latin America in terms of electronic services, e-government, electronic-voting and online payments

Target Outcomes:

- A shared experimental communication infrastructure, interconnected or federated with existing FIRE/Future Internet infrastructures
- Experience pilots, such as the development and test of concrete advanced applications and services of public utility



shared experimental communication infrastructure

- at large scale, supporting access to mobile and/or wireless technologies
- interconnected or federated with existing FIRE/Future Internet infrastructures (e.g. Onelab, Federica, Panlab, ORBIT-OMF)
- can be based on the integration of a large-scale optical transport network with a variety of access technologies, including wireless
- underlying emerging technologies and research areas:
 - network virtualization
 - delay-tolerant networks
 - opportunistic communications
 - people-centred and content-centred routing / naming / addressing schemes
- based on open standards with open Application Programming Interfaces (e.g. Openflow or InterCloud communications)



experience pilots

experience pilots

- The testing of the interconnection and interoperability may include, as experience pilots, the development and test of concrete advanced applications and services of public utility, in target areas such as:
 - education
 - Telemedicine
 - environmental and climate monitoring
 - applications supporting biodiversity



Expected Impact

- Creating a large-scale experimental facility for Future Internet research in Brazil
 - involving the Brazilian network research community and associated industry
 - federated with similar facilities in Europe
- To lower entry barriers and promote competition in the development and experimental validation of proposals for new network architectures, services and applications of public utility



Topic (d) Future Internet - security

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Overall Guiding Principles



- **Vision:**
 - contribute to the digital inclusion for all citizens
- **All citizens means:**
 - independent of educational, cultural and economic environment, computer literacy
- **Target outcome:**
 - challenges defined in WP must be addressed in an integrated manner



- **Development of**
 - trusted communication infrastructures
 - application service environment(s) providing secure and consistent access to functionality
- **Addressing**
 - trust and security up front



Key features

- Satisfy citizens needs and circumstances
- Irrespective of access device, access network and service provider network
 - ensure same quality of experience
 - personalisation, usability and accessibility
 - quality of service
- Control and security of personal data
 - data management and handling
 - access, storage, protection and accountability
- Consistent user access to services
 - independent of cost, location, service type
 - user profile management



Topic (e) e-Infrastructures

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Topic (e) e-Infrastructures



Topic (e) e-Infrastructures

EU and Brazil collaboration on e-Infrastructures:

- Builds on the solid ground of existing projects.
- Contribution in addressing global challenges in areas where the EU and Brazil possess unique capabilities or resources.

Target Outcomes:

- To create a data and open access e-Infrastructure enabling collaboration on virtual & remote instrumentation and taxonomy
- Emphasis on life sciences, biodiversity and climatology.
- Allowing the integration between Brazilian and European e-science initiatives.



R&D should address the following two subtopics :

- **Remote operation and virtualisation of research installations and instruments.**
 - integration of existing e-Infrastructures,
 - creation of procedures, easy to use interfaces and scientific gateways
- **Open access and open data platforms and organisational structures**
 - in support of geographically dispersed scientific communities
 - informatics for life sciences, taxonomy, biodiversity and climatology, taking advantage of Brazil's unique conditions.
 - creation of Federated Scientific Repositories as well as Open Source Taxonomy platforms both as enablers of collaborative research and as educational environments.



Proposals should:

- include specific activities for the identification of future Brazil-EU collaboration using e-infrastructures in the above two subtopics.
- address the use of existing e-Infrastructures in support of their stated goals,
- have a maximum duration of 30 months.
- allocate resources to address **both subtopics** (none of the subtopics should be allocated less than 1/3 of the total resources)



Expected Impact

- Promote the consolidation of a state of the art e-Infrastructure
 - exploiting the computational, communication and data resources on both sides
 - enabling the EU and Brazil to address grand challenges in science and society
- Bringing together the different scientific communities via advanced e-Infrastructures to facilitate the progress towards Open Science, Access and management in various scientific fields.

