

EU-IndiaGrid2 sustainable e-Infrastructures across Europe and India

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EU-IndiaGrid2 - Sustainable e-infrastructures across Europe and India – is a project funded by European Commission project under the Research Infrastructure Programme of the Information and Society Directorate General with the specific aim of promoting international interoperation between European and Indian e-Infrastructures.

2010 has been an eventful year for e-Infrastructures across Europe and India with a number of important achievements. The EU-Idiagrid2, thanks to the active role of its partners was at the core of all these events that contributed significantly to the project progress towards its objectives. Here we quote the most important ones.

- The year 2010 started with the **EU-India Workshop on Research Infrastructures** and, in conjunction, the **Launch of the EUIndiaGrid2 project** in Delhi, January 2010. The workshop was co-sponsored by the Department of Science and Technology - Government of India and the European Commission, as one of the agreed bilateral actions under the overall ambit of India – European Union Science and Technology Cooperation agreement. Both events saw very high level participation from European and Indian Delegate and allowed to assess the status and set the premises for further progress in EU-India Science and Technology cooperation.
- A major milestones for e-Infrastructures in India was the **approval of the National Knowledge Network (NKN)**, in March 2010, by the Cabinet Committee on Infrastructure Government of India, with a funding of about 1 Billion euro for a period of over 10 years. NKN will provide transport to all the networks in India by multi-gigabit low latency OFC based backbone. The main design consideration for NKN is to create an infrastructure that can scale and adapt to future requirements. The full approval of NKN and its progress represent a fundamental landmark in the process towards sustainable e-Infrastructures in India.
- The **approval of phase three of GARUDA, the Indian National grid Initiative** represented a further step forward towards sustainable e-Infrastructures in India. GARUDA has transitioned from the Proof of Concept phase to the Foundation Phase in April 2008 and currently is in the third phase namely Grid Technology Services for Operational Garuda. This phase is approved for three years ending in July 2012.
- Finally the **participation of India to the third generation of the Trans-Eurasia Information Network (TEIN3)** signify a turning point for the interoperation of Indian e-Infrastructures with European and worldwide ones. India is at the heart of TEIN3 with a PoP at ERNET, Mumbai which is a vital lynchpin between Europe and Asia, the GÉANT PoP in Madrid and the TEIN3 PoP in Singapore. TEIN3 is also now fully interconnected to NKN infrastructure allowing a sensible improvement on EU-India collaborative research. In particular since the end of 2010 the TEIN3 connectivity is exploited for LHC data transfer and for material science applications.

The presentation will cover the most relevant aspects related to the progress of e-Infrastructures in India and the developments in interoperation and interoperability with European and worldwide ones with a particular focus on the EU-IndiaGrid2 project role in this process.