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# Intro

For each sentence/phrase in INFRA-2012-3.2 I have put a bullet list of key points I identified and my ideas below.

# **Title: International cooperation with the USA on common e-Infrastructure for scientific data**

- e-Infrastructure: Grid/Cloud/Super Computing
- Need USA partner -- need support from NSF

## **The objective is**

**to establish an EU/USA coordination platform aiming at full interoperability of scientific data infrastructures, and**

- EU/USA coordination platform
  - ◆ main goal is the organisation (the forum) to discuss interoperability of SDI's
  - ◆ the forum should result in a proposed standard(s), reference implementation, and 3-4 applications which use the reference implementation
- scientific data infrastructures:
  - ◆ data access & movement, metadata catalogues, data replica catalogs

**to demonstrate this coordination through several joint EU-USA prototypes that would ensure persistent availability and effective sharing of data across scientific domains, organisations and national boundaries.**

- several (== 3 or 4) joint EU-USA prototypes. Ideas of potential prototypes from HEP:
  - ◆ Remote data access from job (Xrootd, http across the WAN)
  - ◆ Common Cloud storage API: Amazon S3, OpenStack...
  - ◆ ...

## **The platform should provide for:**

**the collection of requirements and approaches for standardisation (development, promotion, adoption and maintenance);**

- Workshop to collect requirements, see various scientific data infrastructures
- Form Technical Working Group:
  - ◆ Requirements deliverable document
  - ◆ prepare solution approaches before next workshop

**common ICT infrastructure approaches (technical, semantic, reference architecture, financing models, etc) in order to lower access barriers;**

- Workshop to discuss proposed solutions -- technical proposals for interoperability between SDI's

**harmonisation of intellectual property frameworks for scientific information;**

- Open access licences for all technical deliverables
- Papers published in peer reviewed conferences/journals

**and mechanisms for international networking of experts and multidisciplinary communities.**

- Need 2 or 4 workshops (1/2 EU, 1/2 USA)
  - ◆ 1st to discuss requirements, catalog existing scientific data infrastructures, networking
    - ◇ Form Technical Working Group
  - ◆ 2nd where parties present proposals for prototype common data infrastructure
  - ◆ 3rd reference implementation
  - ◆ 4th applications using the reference implementation.
- Workplans:
  - ◆ NA3.2.1: Project Management
  - ◆ NA3.2.2: Coordination
    - ◇ Organize workshops (2 of them. USA should organise the other half).
    - ◇ Disseminations, Training.

# The joint prototypes should leverage and build upon similar initiatives in Europe and USA.

- Similar initiatives:
  - ◆ WLCG storage
  - ◆ SRM
  - ◆ WLCG Storage Jamboree: Dynamic data dist., Xrootd, NFS 4.1, HTTP, Data caching,
  - ◆ Cloud Computing R&D: search for common data API: Amazon S3, OCCI

# The proposal should clearly describe synergies and collaboration with corresponding existing or potential NSF-funded initiatives.

- Main collab should be with OSG
- Also specific HEP contacts -- ATLAS, CMS NSF-funded projects?

-- DanielVanDerSter - 18-Oct-2011

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This topic: LCG > DanIdeas

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