

FKPPL Project application (2012)

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ID: Title	GRID Computing					
Members	French Group			Korean Group		
	Name	Title	Affiliation	Name	Title	Affiliation
	<u>Leader:</u> Dominique Boutigny	Dr	CC-IN2P3	<u>Leader:</u> Soonwook Hwang	Dr	KISTI
	Ghita Rahal	Dr	CC-IN2P3	Hieu Vu Trong	Mr	KISTI
	Yonny Cardenas	Dr	CC-IN2P3	Sangwan Kim	Mr	KISTI
	David Bouvet	Dr	CC-IN2P3			
	Sylvain Reynaud	Mr	CC-IN2P3			
Requested LIA specific funding from France						
Description	Euro/unit	Nb of units	Total (euros)	Requested to: *		
Visit to Korea	100/day	12 days	1200	IN2P3		
Travels	1000	4	4000			
Total			5200			
Requested funding from Korea						
Description	Won/Unit	Nb of units	Total (Won)	Requested to: **		
Visit to France	200000/day	10	2,000,000	KISTI		
Travels	2000000	2	4,000,000			
Organize a Grid tutorial			8,000,000	KISTI		
Total			14,000,000			
Additional funding	Funding from France			Funding from Korea		
	Provided by or requested to ***	Type	Euro	Provided by or requested to	Type	Won

* For example: IN2P3, CEA. ** Korean University or Institute. *** French Embassy, CNRS Egide,.....

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Summary of Project	<p>The goal of this project is to develop the collaboration between the French and Korean computing centers in the area of grids and e-Science. Grid computing has been around as a key enabling technology for the realization of e-Science by providing a hardware and software infrastructure needed to enable the integrated and coordinated use of a wide range of geographically distributed resources including computers, databases, instruments and even people.</p> <p>This France-Korea joint activity is intended to provide computing facilities and user support needed to foster scientific applications established under the framework of FKPPL LIA collaboration. Furthermore, this activity aims to promote the adoption of grid technology and grid awareness in Korea and France by providing scientists and researchers with production Grid infrastructure and technical support necessary for them.</p> <p>To achieve this goal, CC-IN2P3 and KISTI will continue to work closely together to maintain and operate a production Grid infrastructure called France-Asia VO established in 2011 by the collaboration of KISTI (Korea), KEK (Japan), and CC-IN2P3 (France), which are dedicated to providing its members and e-Science users of France and Asia countries with access not only to computing and storage resources but also to high-level grid services.</p> <p>With the goal of the extension and improvement of the France-Asia VO, we intend to continue to pursue this collaborator work in 2012 as well. In particular, we are keen on enabling the support to the France-Asia virtual organization at IHEP computing centre so that it can join the already enabled sites (KEK, Kisti and CC-IN2P3). The direct benefit of this would be that computing tasks submitted by any member of the existing particle physics associated international laboratories between France and the Asian countries (FxPPL) would be allowed to use the computing resources offered by the sites of the participating countries, i.e. China, France, Japan and Korea.</p> <p>The responsibility of each team of the project are the following:.</p> <ul style="list-style-type: none">- CC-IN2P3 will share with KISTI its expertise in the operation and monitoring of the EGEE grid infrastructure.- CC-IN2P3 will provide the interoperability tool: JSAGA- KISTI will involve its IT developers in the e-science application porting support on the France-Asia VO Grid with a particular emphasis on the porting of applications for projects under the framework of the FKPPL LIA collaboration- KISTI will organize Grid-related workshops and tutorials to promote the use of full power of Grid infrastructures for large-scale application developments for researchers in Korea, Japan, Vietnam and France.- CC-IN2P3, KISTI and KEK will team up together to :<ul style="list-style-type: none">- Provide production-level grid services to scientists in both countries.- Develop portals, user interfaces and tools to facilitate users access to the grid resources- KEK and CC-IN2P3 will perform some planned tests of data disaster recovery policy experiment in Japan. The benefit of this test is twofold. First, experts at KEK and at CC-IN2P3 are both very interested in exploring the wide-area data replication features built into iRods software in order to validate this tool as a solution for replicating data for a data disaster recovery real-world usage. Second, the Sino-French TREND experiment propose a real use-case for this test: selected datasets of the experiment,
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currently physically located in the main repository at CC-IN2P3, could be automatically replicated to KEK by iRods and would be used to feed grid jobs running in the Asian computing centres supporting the France-Asia VO, in particular in IHEP computing centre. This test will allow us to validate the robustness of iRods for replicating data over long distances and its ability to efficiently serve the data to jobs running at distant sites.

- IHEP-Beijing and CC-IN2P3 will evaluate the suitability of the France-Asia grid platform as a solution for the computing needs of the researchers of the THCA (Tsinghua Centre for Astrophysics). Several hundreds of CPU cores are needed to rapidly perform simulations in the cosmology field and the grid platform seems well suited to this use-case: we want to validate this hypothesis.
- IOIT-Vietnam, CC-IN2P3 and KISTI will deploy the DIRAC service for the usage of the France-Asia virtual organization. DIRAC (Distributed Infrastructure with Remote Agent Control) is a system that provides a complete grid solution to a community of users requiring access to distributed computing resources. The users of the France-Asia virtual organization at large would therefore benefit of this service.