

## **ABSTRACT**

Master's Certification work

on:

“European Grid infrastructure (EGI) and the 7th Framework Programme grid projects”

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### **Purpose**

The aim is to study the European Grid infrastructure EGI and the 7th Framework Programme Grid projects, classify them by purpose and identification of the main EGI trends.

### **The relevance of research**

On December 22 2011 a Memorandum of Understanding (MoU) between the EGI.eu and Base Coordination centre of UNG (BCC UNG) was signed. The agreement paved the way for the integration of UNG in the EGI, with the tremendous opportunities and advantages for UNG. While integration is in process and the direction of further development of the European Grid infrastructure necessary is not clear, very important to identify on what areas should UNG concentrate and what way move.

### **Tasks to be solved**

1. Study the transition from EGEE to EGI;
2. Research UNG integration into the EGI and its results for users;
3. Research ways for Ukrainian Grid infrastructure development;
4. Analyze and classify 7<sup>th</sup> Framework Programme grid projects;
5. Define the vector of the European grid infrastructure (EGI).

### **Achieved results**

Having solved tasks that were put in the work, the author defends:

- Analysis of the transition from EGEE to EGI model;
- Analysis of integration UNG in EGI;
- 7th FP grid projects classification and their relation with 6<sup>th</sup> FP grid projects;
- Trends in grid technology;
- The role of EGI in shaping the Framework programs;
- Opportunities for participation of Ukrainian organizations in international grid projects;
- Grid projects in Ukraine;
- Analysis of the European grid infrastructure in relation to framework programs

### **Scientific novelty of the work**

The scientific novelty of the work is that:

1. The integration analysis of UNG in EGI and the result of this integration for the end user;
2. The possible future path of Ukrainian national grid infrastructure (UNG) development was provided.

### **Conclusions**

- Analysis of the transition from EGEE to EGI and future directions of European grid infrastructure were provided;
- The integration analysis of UNG in EGI and the result of this integration for the end user;

- The 7<sup>th</sup> Framework Program grid projects analysis and their classification was provided; analyzed 7<sup>th</sup> Framework Program grid projects in Ukraine and established the role of EGI in the formation of Framework programs;
- Recommendations for further development of UNG are provided.

Work consists of 98 pages, includes 33 illustrations, 8 tables and 27 bibliographic items.

Keywords:

EGI, EGEE, transformation projects, FP7, FP6, Horizon 2020, UNG, УНГ, NGI, middleware, EGI.eu, EGI-InSPIRE.