

A) General Information



Acronym:	EnergyMAD
Title of the User-Project:	Harmonics level produced by the grid connected RE sources and optimal filtering solutions
TA Call:	
Host Research Infrastructure:	EDF-R&D, MIRE Dept., Clamart, France
Starting Date:	15.10.2012
End Date:	17.10.2012
Lead User :	Tiberiu TUDORACHE
Organization:	University POLITEHNICA of Bucharest
Additional Users:	

B) Summary of the User-Project

The main goal of the proposed project is represented by the evaluation of the harmonics level generated by the grid connected Renewable Energy (RE) sources and by the analysis of optimal filtering solutions.

A first step in this study consists in **preparing the numerical tools** necessary for the simulation and analysis of the RE sources (wind/pv/batteries) and for the evaluation of current harmonics injected into the grid by the power electronics converters interposed between the sources and the power system.

The **numerical tools and instruments** should be able to model complex electric circuits and to compute and process efficiently large quantities of data.

The technical facilities offered by the remote access DIGI²TAL platform, developed by EDF R&D, MIRE Dept., represent a preliminary basis for the achievement of the project goals.

C) Main Achievements

The main achievement of the project consists in the preparation of the technical steps necessary for the remote access and use of the digital platform (DIGI²TAL) that includes helpful technical information (CIM tools, etc.) and numerical tools (Matlab, OpenDSS etc.) that can be used for the analysis of electric power systems as well as of power quality aspects generated by the RE sources.

DIGI²TAL platform has also the merit to allow the access to the existing resources of EDF R&D MIRE Dept., of several users in parallel, facilitating thus the teamwork.



D) Dissemination of the Results (Planned)

A presentation of a paper at a national or international conference and a webpage developed under www.microderlab.pub.ro

E) Use of the Resources (Expected)

Nr. of Users involved:	1
Access Days:	3
Stay Days:	3