

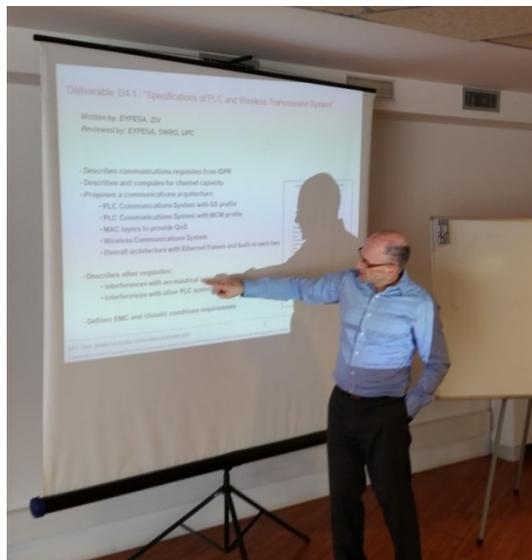
PRESS RELEASE

from the 7th Framework Programme Project “Smart Rural Grid”

The Smart Rural Grid project presents its first prototype on PLC Communications

In a project meeting on the first anniversary of the Smart Rural Grid the first prototype developed in the project could be presented. Fernando Castro of ZIV Communications could this week present the result of 12 months intense development in Work Package 4 (WP4). WP4 is concerned with communications issues to be able to manage the different power electronic devices that will route the electric energy in different ways according to the needs of the distribution net operator (DSO). In a meeting held in Granollers in Catalonia, Spain this week Mr. Castro could provide hard evidence that project work is beginning to produce real value. WP4 is extending the Power Line Communication (PLC) concept that allows communication signals to be transmitted across live power lines. PLC technologies have often been used in urban areas where communication distances are limited to a few hundred meters. Mr. Castro and his project team are extending this so as to cater for much longer transmission distances, 10-15 km, to support transmission along radial power lines that stretch across long distances, typically in remote rural areas. Once achieved it will be a landmark achievement. Moreover the PLC communication must be able to connect to other types of communication systems so as to constitute a robust communication service for the DSO which is going to operate sophisticated systems far away. This requires immediate responses where room for failure is close to nil. This week Mr. Castro was able to share the results and his team’s experiences with the rest of the project group others who follow the project closely. Mr. Castro showed the first prototype of the basic communication module.

“Its purpose it to use the power lines for electricity distribution as a transmission media, communicating the different points of the network with the control centre of the DSO. Since the electricity cables were originally designed for the supply of electrical energy its use as a communications media results in background noise and distortion. Also the long distances typical of rural environments make it difficult for the receiver to detect the incoming signal, and it is more likely to generate and be affected by interferences. The design of the PLC system takes all these factors into account and has been designed to also interact with the necessary elements for



building the complete network, such as switching and routing devices.”

On the state of progress Mr. Castro adds, “The whole communications network will be completed with radio and fiber optics segments. The initial tests have been very satisfactory and make us feel very confident about the outcome of this research.”



The Smart Rural Grid project is supported by EU's 7th Framework Programme. Its aim is to develop an innovative smart grid approach targeted to the particular conditions of rural energy distribution networks. The project will devote particular attention to highlight the differentiated specificities of rural energy distribution and will target the need for substantial improvements in terms of efficiency, quality and network resilience. The project is focused on the needs and visions for the future of DSOs' with rural networks, and intends to allow them to operate more efficiently, integrate local renewable energy sources, interconnect prosumers and increase and guarantee the quality of energy supply by creating resilient and manageable energy islands.

Lead partner of the project consortium is the Spanish energy company “Estabanell y Pahisa Energia”, and the consortium consists of:

- Universitat Politecnica de Catalunya (ES)
- ZIV Communications (ES)
- Xarxa Oberta de Comunicacio i Tecnologia de Catalunya SA (ES)
- KISTERS AG (DE)
- Stadtwerke Rosenheim Netze GmbH (DE)
- CG Power Systems Ireland Ltd. (IR)
- Smart Innovation Østfold – NCE Smart Energy Markets (NO)

General information about the project can be found on www.smartruralgrid.eu.

For more specific information about PLC and the communication technologies developed please contact Mr. Fernando Castro of ZIV Communications by e-mail at: f.castro@ziv.es. More information on ZIV Communication can be found at: <http://www.communications.ziv.es/>

For more information on the Smart Rural Project please contact the CEO of Estabanell y Pahisa Energia (EYPESA) Mr.Santiago Martínez Farrero, email: SMartinez@estabanell.cat or Professor Bernt A. Bremdal bernt@ncesmart.com.