

ITALY DAY

ABSTRACT TABLE OF PROJECT PROPOSAL

PROJECT Nr. 21

- SECTOR:** Renewable Energy (PhotoVoltaic)
- PROJECT IDEA IN A HEADLINE:** Our project is a monitoring device that makes available to the final user, the installer and to the designer too, data from the photovoltaic plant such as energy produced, energy consumed, power Ac/Dc and faults.
- INNOVATIVE POINTS:**
- Wireless and wired communication used to send data from photovoltaic plant over internet;
 - Drag and drop web applications for monitoring;
 - Internet Key used to send data from photovoltaic plant over internet;
 - Data retrieved from inverters and counters;
 - Enhanced local storage system(8GB);
 - Sms and Email used to send data and faults;
 - Simple wizard in order to avoid configuration complexity;
 - Dynamic IP(dhcp enabled);
 - Domotics apps and alert in order to achieve the best energy needs.
- BRIEF PROJECT DESCRIPTION:**
- It is a monitoring device that makes available to the final user, the installer and to the designer too, information from the photovoltaic plant. It's based on a microcomputer developed using a client/server software architecture. It enables the communication with the Inverter through the most used communication interfaces. Thanks to the wireless and wired communication with the counters, it is adaptable to all the environments: large and small distances. It enables the communication with the string controller too. It analyses the data to detect problems in order to restore the best condition for the energy production. Sms and Email are sent to signalise the faults. It is a monitoring device that makes available data from the photovoltaic plant such as energy produced, energy consumed, power Ac/Dc and faults. It's based on a microcomputer developed using a client/server software architecture. The system enables the communication with the Inverter through the most used communication interfaces.
- Thanks to the wireless and wired communication with the counters, it is adaptable to all the environments: large and small distances. It enables the communication with the string

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controller too.

The system analyses the data to detect problems in order to restore the best condition for the energy production. Sms and Email are sent to report the faults. It is an useful device. Due to storage systems(8GB) and cpu(400mhz) it provides data, graphs and table locally without connecting to a remote server. The data, the graphs and the tables are showed through a simple web browser. The data are also sent through wide band connection like: HSUPA/HSDPA/UMTS, XDSL, WIFI. Moreover it provides a simple drag and drop application in order to design the devices used for the monitoring. Once designed the monitoring system it is possible to query the single device in order to obtain the monitoring data stored for the single device.