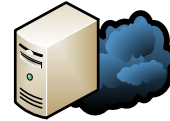**TEMP. SENSOR AND PYRANOMETER**
These sensors are connected to the DAQ system to measure irradiance and temperature, to collect climatic data of the installation site to be used in the yield calculation of on-roof micro-generation PV projects on roof.
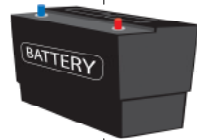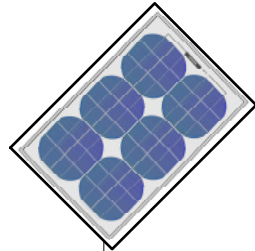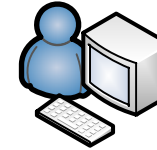
HTTP SERVER
Server managing and storing data from the On-Site equipment. Accessable all over the internet

SYSTEM OPERATOR
Receives real-time alarms, warnings and data. Watches out the system operation.

ee Solar

ON-SITE ELECTRONIC AND COMM. EQUIPMENT

3G MODEM
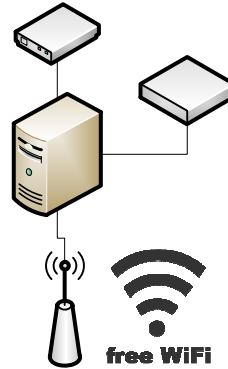Modem to connect to the internet via 3G.

MICRO-PC
Raspberry Pi or similar under Linux, managing WiFi connections and sending usage data from DAQ to main server via 3G modem.
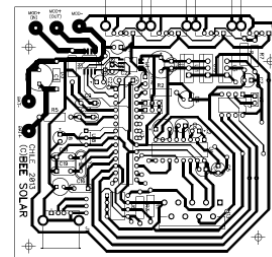
WiFi LINK
Wifi adapter to provide signal to final users. It also provides usage statistics to Micro-Pc. To connect, users must provide a valid id. card number.
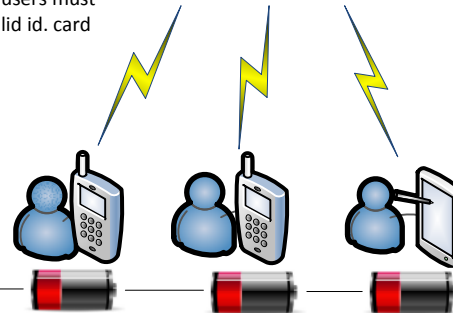
DATA ACQUISITION SYSTEM
Microcontroller based DAQ that calculates the number of users attached to USB chargers and send data to the Micro-PC to build usage statistics, provide warnings an alarms, etc.

DAQ Electronic Board for the 1st prototype

free WiFi

FINAL USERS
Access to web via Wifi using cell phones, tablets, pc's. Charging the phone's battery with solar power.

BATTERY

DESIGN SPECIFICATIONS:

1. The system must be capable to provide USB (5V) power to charge the bateries of at least 4 simultaneous cell phone users.

2. The charging system must be capable to provide satandard mini-USB, micro-USB and female USB connectors to users.

3. The system must be capable to provide internet to at least 10 simultaneous users.

4. The system must be capable to count WiFi acces users and to count cell charger users to provide statistics.

5. The charging solar system must have an endurance of at least 5 days with no sun in central Chile.

6. The system must be protected from attacks from the WiFi users and internet hackers.

7. The system must provide real-time alarms, warnings and data to the system operator.

8. The whole system must be rugged and protected from moisture, rain, hot and cold wather. All the components must be industrial-grade.