

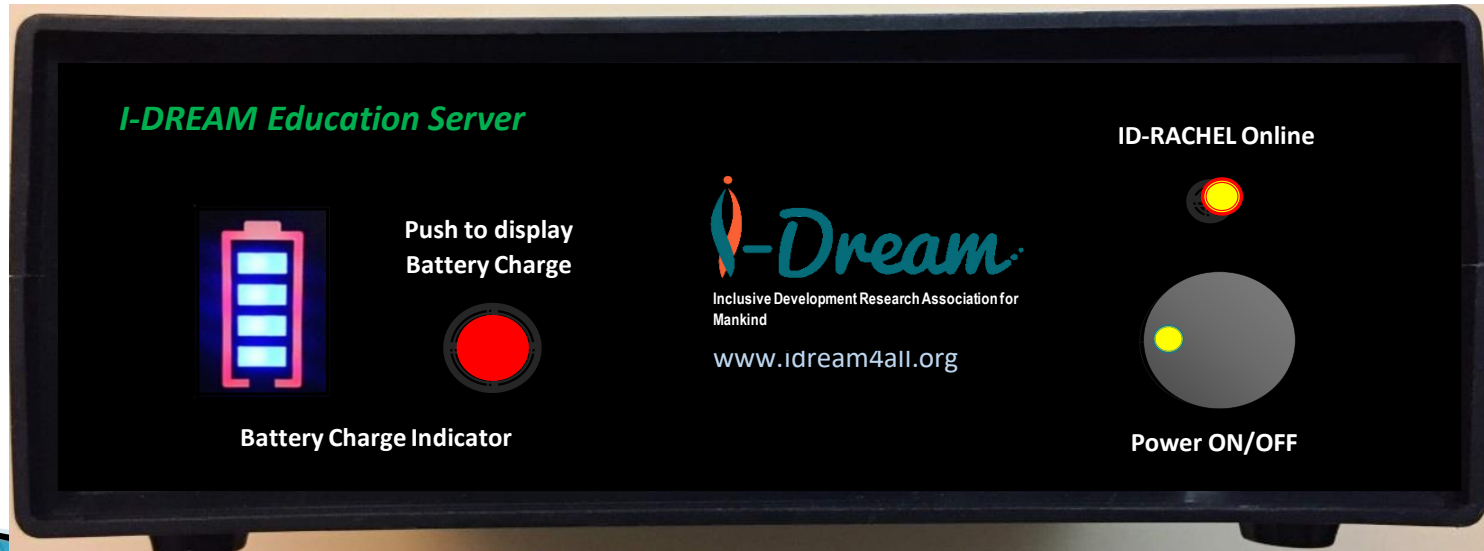
Arduino Club

아두이노 클럽

15 Feb. 2020

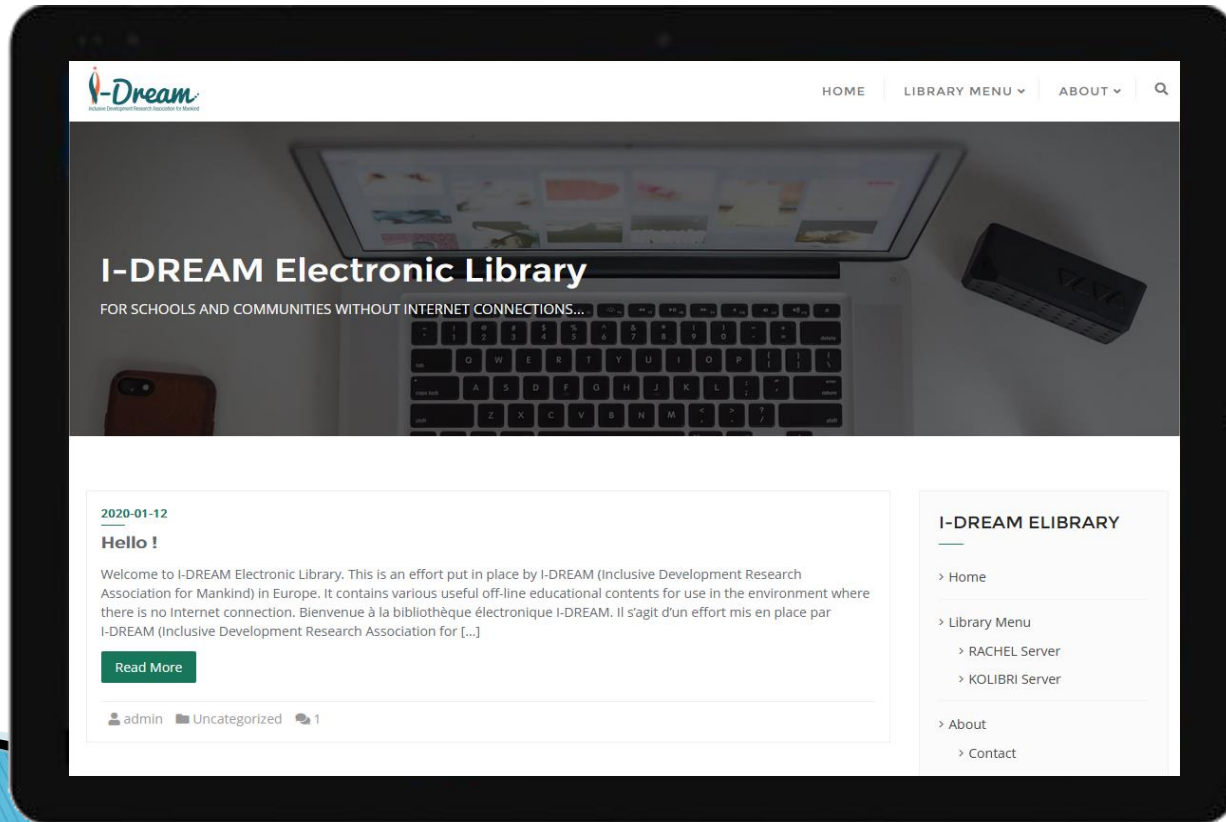
ID-eLibrary: Electronic Library for Education

- ▶ WIFI server for the unconnected community
 - Inspired by the RACHEL server
 - Integrates additional functions such as IoT, OwnCloud



ID-eLibrary: Electronic Library for Education

- ▶ A WIFI server with millions of contents

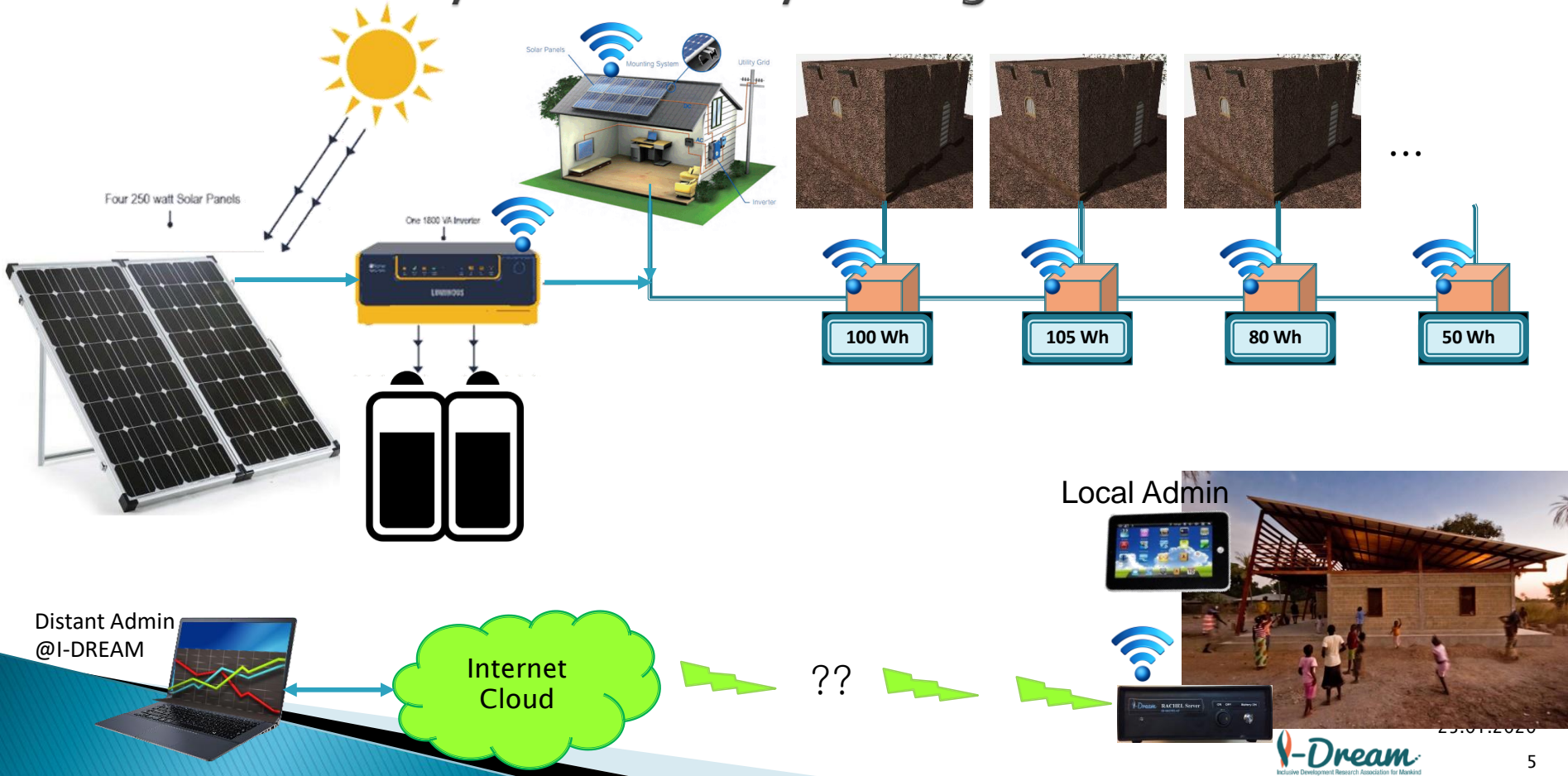


ID-eCommunity: Community Management Server

- ▶ ID-eLibrary became a Hub for Automation & Control



ID-eCommunity: Community Management Server



I-DREAM for your dream of the sustainable world ...

- ▶ Visit our web site: <http://www.idream4all.eu>
- ▶ Membership is open to all who share the same compassion and virtue for mankind
- ▶ Thank you for your kind attention & support ...



Arduino Club in Paris Day 1

- ▶ Day 1: Familiarization of Tools & Example Project
 - Available Tools:
 - Controller: Arduino, ESP8266, NodeMCU, ..., Raspberry Pi, xxxPi, ...
 - Sensor: Temp
 - Information: LED, Display,
 - Actuator: Relay
 - Comm: WIFI, RJ45, Bluetooth, GSM module, LoRa module
 - Power: Power Supply, PoE,
 - Software: Arduino IDE, Win32 Disk Imager, SDFormatter, PuTTY, MobaXterm,
 - IoT Platforms
 - Example Project
 - LED traffic lights by Arduino
 - Relay Control by ESP8266 (via Blynk)

Arduino Club in Paris Day 1

▶ IoT platform

- arduino.cc Arduino source
- mathworks.com Thing Speak
- blynk.io Blynk
- ifttt.com **IF This Then That**
- thethings.io Things I/O
- nodered.org Node-RED
- thingsboard.io Things Board Open Source IoT Platform
- sitewhere.io/en/ Open Platform for IoT
- thinger.io IoT platform

Arduino Club in Paris Day 1

- ▶ Example 1: LED blinking

- Source:

- <https://create.arduino.cc/projecthub/rowan07/make-a-simple-led-circuit-ce8308>

- ▶ Relay Control by Blynk

- Tutorial:

- Blynk channel: https://www.youtube.com/channel/UCKWBP3MdpMQFdOCQ63mhC_Q
 - Local Server: <https://www.youtube.com/watch?v=33ynNkvfvWU>

- Example code:

- <https://examples.blynk.cc/>

Arduino Club in Paris Day 1

▶ Our Project & Work share

◦ eCommunity Management System

- Power Source: Solar Panel + Battery + Charge Regulator + Inverter to 220 Vac
- Power Distribution:
 - Power Cable, Individual House Relay, Relay Controller
 - Relay Controller = Controller + Relay + Current Sensor + LCD + Battery + Charge Regulator + Comms module (WIFI + LoRa)
- Local eCommunity Management Server: Raspberry Pi Server
 - Hardware module: Battery + Charge Regulator + LCD display + Comms module (WIFI, LoRa, GSM)
 - Software:
 - Blynk Server, MQTT Server, (already installed)
 - Charge Monitor, LCD display module,
 - GSM Comm Module, LoRa Communication Module,
 - Power Relay Controller Management,
 - Remote Control System Logging & Command Processing – Google Sheet, Google Calendar, ...