

A report from the Hackathon of Smartcitizen and Meshtastic from Fab25 in the Czech Republic

August 18, 2025 · Davide Gomba



I participated in the Hackathon held on the occasion of the world conference of Fablabs held in the Czech Republic last July in which two great open-source projects worked together to integrate.



Last July the world conference of Fablabs took place between Prague and Brno, in the Czech Republic. The whole maker galaxy moved there for the event from Shenzhen to Boston passing through India, Australia and Africa.

I was not able to go physically, too busy with some other projects that I brought around Europe this summer (precisely, the use of Meshtastic in Transformative Festivals, of which I speak in [this article](#) regarding the Fusion festival in Germany exactly the week before Fab25).

I was not able to go physically, but I was involved in the team of [Rangers of Seedstudio](#) in the Hackathon that aimed to integrate Meshtastic into Smartcitizen.



But let's go in order.

What is Smartcitizen?

WHAT'S SMART CITIZEN?

SENSOR KITS



Easy and ready-to-use open source environmental sensors and devices.

DATA PLATFORM



A free, online platform for people to explore the data they collect, with an open API to make cool applications!

PARTICIPATION

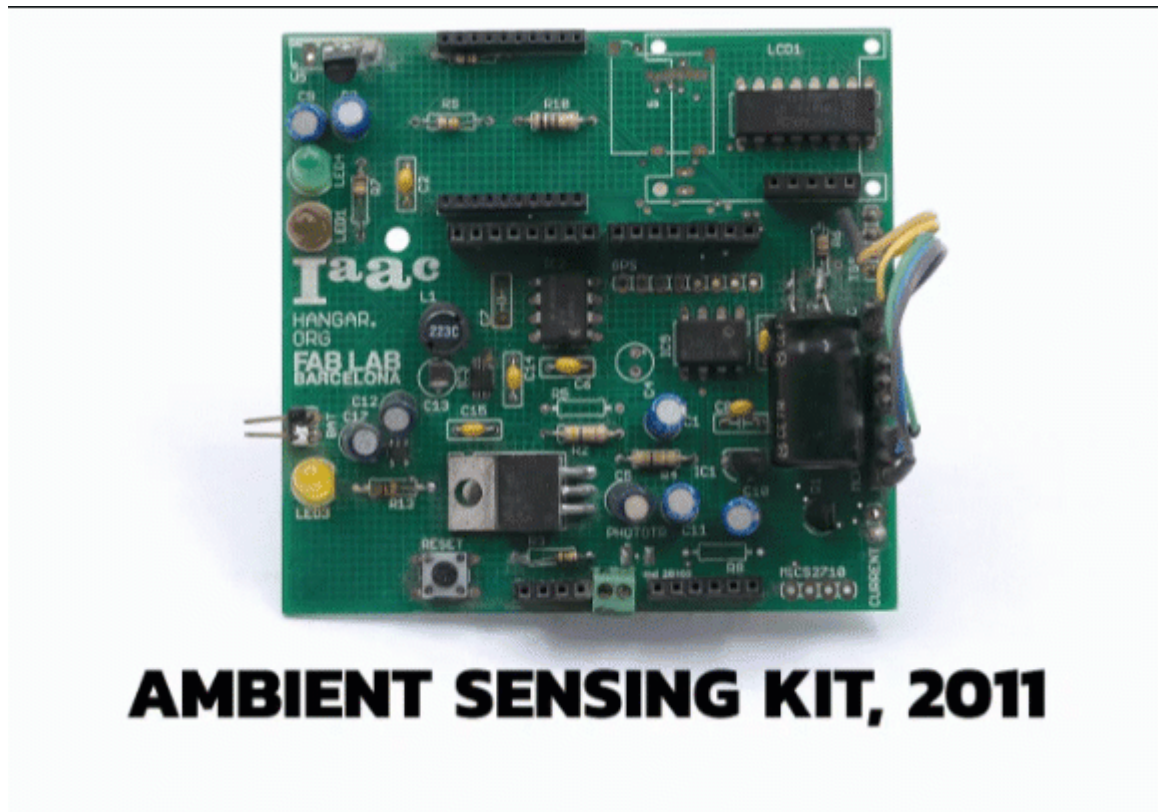


Open resources to support individuals and communities to engage with environmental data, and technology.

Smartcitizen is an old project of Fablab Barcelona, one of the reasons why I became friends with Tomas Diaz. The objective of the project that is now actively carried forward by Óscar González and Guillem Camprodón is that of offering to citizens a tool for monitoring air

quality (but also water in some sub-projects) and a platform to share the revelations.

I have experienced the experience of Smartcitizen countless times over the years, in Scotland, Portugal, Holland, Germany. The project has had countless iterations and has stabilized on an extremely competitive hardware in 2024.



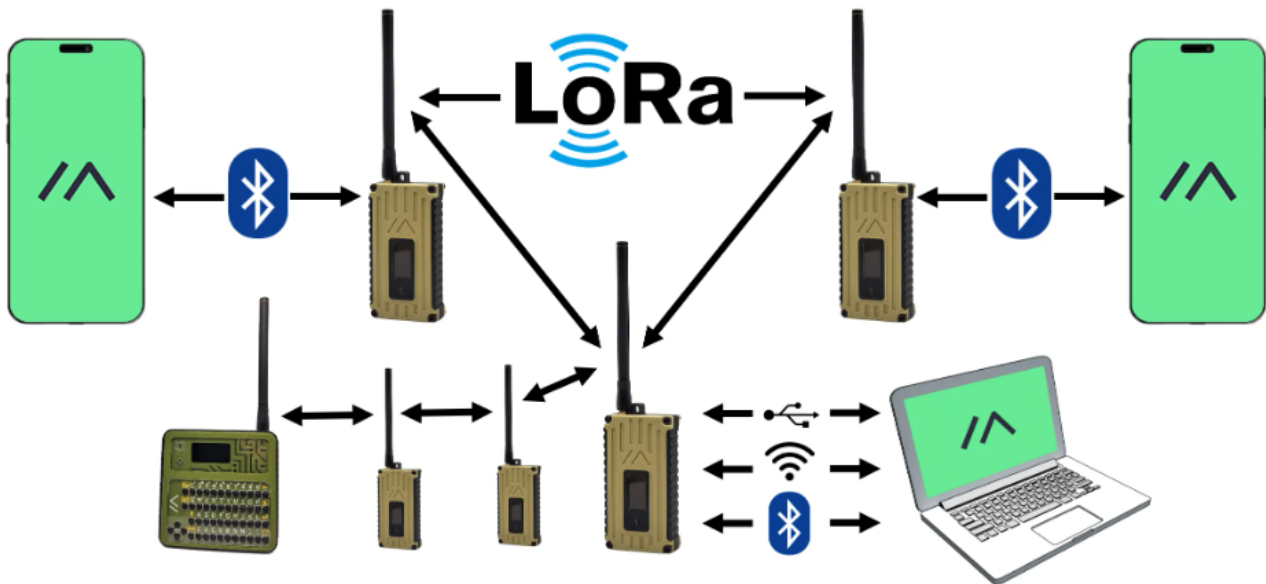
A problem of Connectivity

Despite being a very great open-source project used in more than 70 countries in the world, co-produced with Seeedstudio, a true global project, it has in 2024-25 a big question to answer: how to overcome the limit of Wifi?.

The device has Wifi connectivity, therefore it needs a router to be able to send data online. Not only: the chip with the Wifi consumes much electricity, and this involves another design limit: Smartcitizen boards are not easily portable, needing large batteries or large solar panels plus buffer batteries.

The great innovation in the IoT world of the last two years: Meshtastic

The writer is a user who has adopted Meshtastic for more than two years, and brings around a presentation on this protocol as a cultural phenomenon, a wave that has hit the LoRa frequencies (868 Mhz in Europe) of cities and countrysides: but what exactly is Meshtastic?



As the [site](#) recites: *“An open source, off-grid and decentralized mesh network, designed to run on affordable low-power devices”*.

In practice it is an encrypted and private chat between devices in a Mesh Network. Every message has a life of seven “hops” (jumps), but between one node and another there could be a connection to the internet, therefore you could use Meshtastic from Italy to chat with a friend of yours in Australia.

Being a Mesh network everyone is a piece/node of similar importance, there is no server.

It has been employed in various situations, from the world of hiking to the management of big emergencies, or managing communication in extremely crowded events and far from 3/4/5G antennas (like the big world Transformative Festivals like Fusion, Boom and Ozora in Europe or Burning Man in USA).



https://www.reddit.com/r/meshtastic/comments/1ka7p78/after_this_electric_shutdown_in_spain_im_decided/
https://www.reddit.com/r/meshtastic/comments/1kje2l9/we_are_getting_biliig/
https://www.reddit.com/r/meshtastic/comments/1ka4en5/european_power_outage_huge_shoutout_to_the

Some comments on Reddit in the aftermath of the great Spanish Blackout of June:

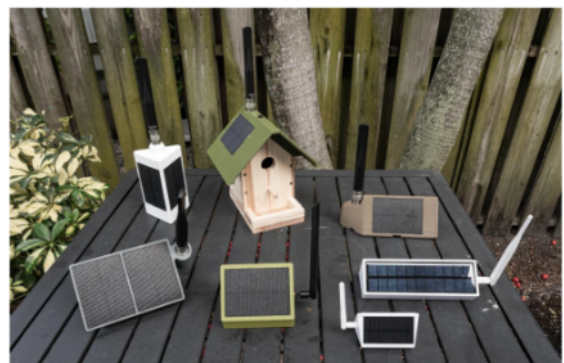
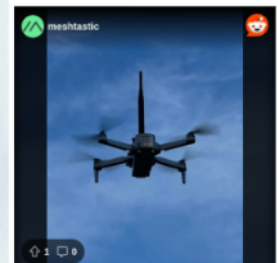
Meshtastic nodes and radios are expressions of the greatest creativity of users. They are solar nodes, or integrated in watches, or similar to blackberry cellphones.

Devices



Phone Interfaced devices (connect via BT)

Complete standalone solutions (with keyboards or dials)



sources : <https://www.reddit.com/r/meshtastic/s/abPWqmR9Ti>
<https://www.reddit.com/r/meshtastic/s/BKClgDB0zc>
<https://www.reddit.com/r/meshtastic/s/n1PRCyk1IE>
https://www.reddit.com/r/meshtastic/comments/1q3li7b/post_hurricane_meshtastic_solar_radio_product
<https://www.reddit.com/r/meshtastic/s/bwA6Bio3Wu>

We were therefore involved to collect the Meshtastic experience and make it enter into the Smartcitizen platform.

Meshtastic is a chat, but it can also send data. [I myself created this tutorial](#) where I explain how to control and automate things with Meshtastic, or read sensors.



Óscar González with my dear friend Violet Su, and the application engineer Hongtai Liu in Brno a few weeks ago.

In short, we will see some good things!.

WANT TO STAY TUNED? JOIN US!

Here you have some links if you want to stay updated on the theme:

WANT TO STAY TUNED? JOIN US!

DISCORD



<https://discord.gg/BxZgRjW6Re>

FIRMWARE FORK



<https://github.com/fablab-bcn/smartcitizen-meshtastic>

3D DESIGN



<https://github.com/fablab-bcn/smartcitizen-enclosures>

Fonte: <https://www.ruralhack.org/en/a-report-from-the-hackathon-of-smartcitizen-and-meshtastic-from-fab25-in-the-czech-republic/>