

Hackathon I 0 I report

Reporter:

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LPWAN at Hackathon I01

- Sat-Sun March 17-18th
- 7 local participants
 - Sandoche, Laurent,
Cédric, Ivaylo,
Juan Carlos, Diego,
Dominique
- 1 remote participant
 - Shoichi Sakane (Japan)



Our goals for the Hackathon



- Disseminate awareness/practice of existing code
- Get some debug/testing done
- Integration of compression and fragmentation implementations, port to MicroPython
- Finish Python server-side implementation
- If time, discuss ICMPv6 for LPWAN

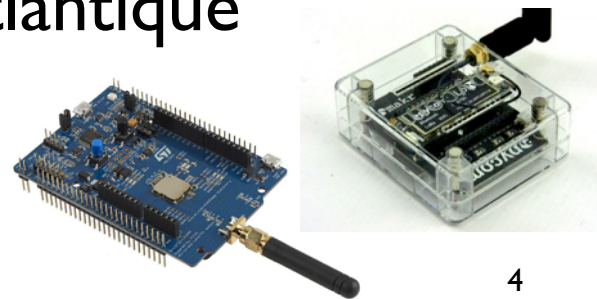
Hackathon resources (1/2)

((LPWAN))

- Connectivity
 - LoRaWAN connectivity provided by Acklio
 - Sigfox connectivity provided by Sigfox
- Development boards
 - Pycom boards provided by IMT-Atlantique
 - Nucleo board provided by INRIA

LoRa
Alliance™

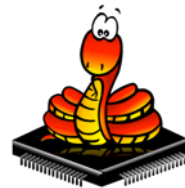
sigfox



Hackathon resources (2/2)



- Code bases
 - SCHC compression/decompression
 - <https://github.com/ltm22/SCHC>
 - MicroPython on Pycom device (LoRaWAN or Sigfox)
 - Javascript on Server
 - Fragmentation/Reassembly
 - <https://github.com/tanupoo/schc-test>
 - Python, uses UDP as transport



What we achieved

- Focused time and fun reuniting with long-time and new friends
- Dissemination of knowledge/skills
 - Pycom boards
 - Operation of existing code
- Implemented comp./decomp. on server side in Python instead of JS
- Fixed bugs in compression implementation
- Bridged computer-based fragmentation with LoRaWAN transmission (RIOT over Nucleo board), success!

To be continued

- Port of Fragmentation/Reassembly code to constrained Device
 - Micro-Python
 - Sigfox and/or LoRaWAN transport
- Integration of SCHC C/D and SCHC F/R
 - Device side and Server side
- Port to C on RiOT
- Application to firmware update (SUIT)

Thanks!