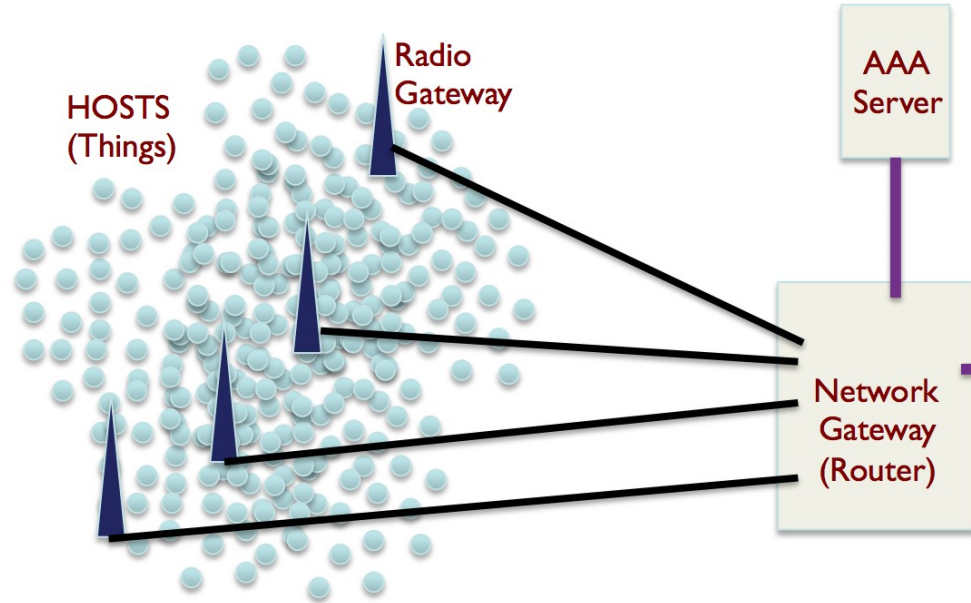


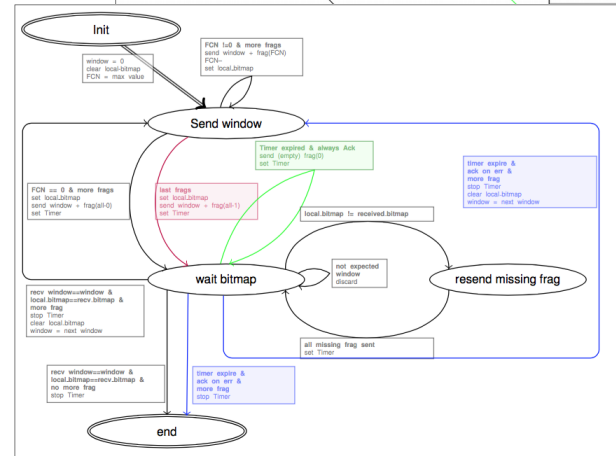
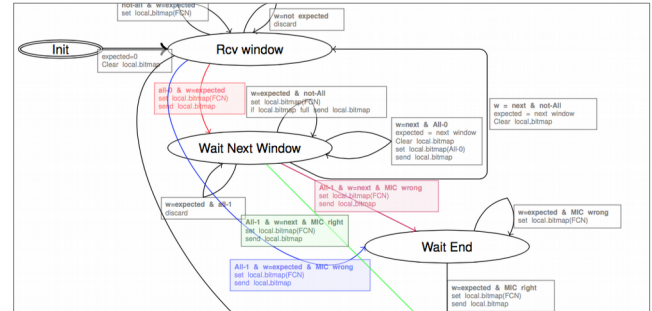
# LPWAN IPv6 fragmentation

- [draft-ietf-lpwan-ipv6-static-context-hc](#)
- Efficient fragmentation on very small payloads
  - complements compression
- Goals
  - prove algorithm
  - provide reference code
  - allow perf. evaluation



# Status of LPWAN fragmentation

- Windows of fragments
  - Bitmaps for ACK'ing fragments in windows
- Three different ACK modes
- Started with textual description
- Several brainstorm sessions
  - interim meetings, side meeting
- Then drew state machines
- Still discussing



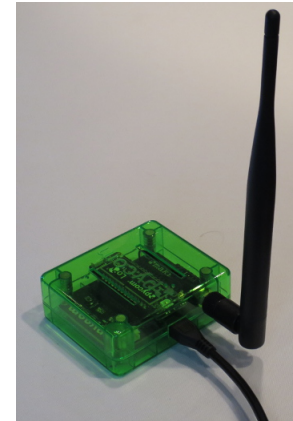
# IETF100 hackathon team

- 3 academics/govt:
  - Laurent Toutain: IMT-Atlantique
  - Cedric Adjih: INRIA
  - Sandoche Balakrishnan: AFNIC
- 3 companies:
  - Alexander Pelov: Acklio
  - Soichi Sakame: Cisco
  - Dominique Barthel: Orange



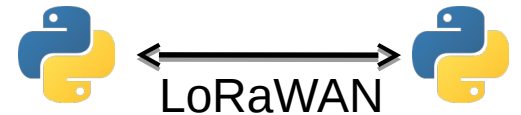
# Achieved at this Hackathon

- Source code available at <https://github.com/ltn22/SCHC>
- Implementation
  - Developed fragm/assbly Python3 code on Server and End-Device (Pycom)
  - Update compression code
- Testing
  - over LoRaWAN, over UDP



End-Device

Server



# What's next

- Provide food for thought at side meeting
  - Tuesday 9:30-12, Butterworth
- Integration of fragmentation and compression
- Converge on draft
  - [draft-ietf-lpwan-ipv6-static-context-hc](#)
- Performance evaluation on real payloads
  - CoAP, ICMPv6

Thank you!