LPWAN Multicast

Juan Carlos Zúñiga (Sigfox), Olivier Gimenez (Semtech)

Multicast – Problem Statement

- LPWAN systems can greatly benefit from multicast services for several reasons
  - SW/FW updates
  - Network policies
  - Etc.

- Some technologies already support multicast services

- At present, the SCHC protocol RFC 8724 only considers unicast data delivery services

LPWAN Multicast

LPWAN Multicast Alternatives

- Non-reliable multicast fragmentation support
  - Multicast over SCHC No-ACK Mode

- Reliable multicast fragmentation support
  - ARQ over SCHC, e.g. unicast ACK-on-Error response
  - FEC at lower-layer
  - Other mechanism at application-layer

- Other
  - Some variant of the Trickle algorithm

IETF LPWAN – Potential Work Item

- There are several solutions for providing multicast services
  - L1/L2, L3, Application
  - Centralized/Distributed

➢ Not all solutions would be in scope of IETF LPWAN WG

- It is proposed to:
  1. document needs,
  2. identify potential solutions, and then
  3. discuss if some specific solution would be in scope for the LPWAN WG

LPWAN Multicast