

# LPWAN BoF

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# Summary of potential work items

- Compression, fragmentation
  - IP + app !
- Security, mobility
  - Overlay
- Scheduling
- Management
  - Devices, Radio Resources, Gateways
- Signaling
- RESTful enablement
- Architecture to tie all together

# Pragmatic approach

- Stepwise charter – feasible steps
  - Compression – drafts exist
  - Overlay, security, mobility – solution exist, or are being worked out at other IETF WG
  - Scheduling – being worked out at 6TiSCH, open source exists
  - AAA – architecture
- Focused on LPWAN Community

# Charter points - I

Produce an Informational document describing and relating some selected LPWA technologies. This work will document the common characteristics and highlight actual needs that the IETF could serve; but it is not an intention to provide a competitive analysis. It is expected that the information contained therein originates from and is reviewed by LPWA stakeholders, and that this WG may leverage the resulting document to suggest new activity in other WGs.

# Charter points - II

Produce best practice documents highlighting potential areas where IETF technologies may be leveraged; these documents may eventually be published as Informational RFCs. It is an expectation that the resulting document(s) may contribute to the interaction with LPWA stakeholders and lead to additional work in the future. Envisioned topics include security, management, and cross-layer optimizations.

# Charter points - III

Produce Standard Track documents to enable the compression of a CoAP/UDP/IPv6 packet over LPWA. Considering the extreme constraints, the work will focus on a generic YANG data model to describe the compression, and protocols to install the related state at the compression end-points; the work will also include, for the selected technologies, specific Standard Track documents to describe how the fields relevant to the decompression are encoded over the air, if any.

## Charter points - IV

Produce a document to enable the fragmentation of larger packets over LPWA, either as a Best Practice leveraging existing technology, or as new Standard Track document if that is deemed necessary.

# New WG?

- Existing solutions for compression (only)
  - 6LoWPAN – can distribute context
  - RoHC – very powerful contexts
  - Best of both worlds
- Architecture work – similar to 6TiSCH
  - Put together protocol elements
  - Look at the global architecture and whole protocol stack
  - Propose items to other WG
- Work must be done in timely manner
  - Reuse existing work, propose extensions
- Unify L2 viewed from apps and devs (hourglass model)