IEEE 802.15 LPWA update

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802.15.4w status

- At September interim meeting, a merged approach was decided:
  - LDPC (Low Density Parity Check) for LPWA / Sony
  - Scalable Multiple Access Frame Structure / KAIST
  - MAC Proposal for 802.15.4w Standard / KAIST, ETRI
  - TSMA preview for 802.15.4w / Fraunhofer IIS
  - Single-hop LPWA Repeater for Harsh Environment
  - Priority-Based CSMA/CA for LPWA
- A drafty merged draft is available, will be under intense review all next week
- A coexistence document (mainly considering 802.11ah) has been started

SCHC for 802.15.4w

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SCHC for 802.15.4w

- Awaiting new IETF SCHC draft, draft-authors-lpwan-schc-802154-00 unchanged since IETF 102
- Needs updates to conform to Appendix D of draft-ietf-lpwan-ipv6-static-context-hc-17
- Not an official IEEE 802.15.4w publication, but a result of interest from the 4w task group
- Work item has now been adopted by SC IETF
- -00 Uses 802.15.4 fragmentation instead of SCHC.
  - *TODO:* analyze whether new SCHC F/R is better.
  - This will broaden applicability to other 802.15 PHY

SCHC Parameters specified

- Size of the Rule ID = 3
- Use of Padding to byte boundaries
- L2 CRC – either 16 or 32, but 32-bit preferred
- Using fragmentation at layer-2, these are not needed:
  - Fragmentation Delivery Reliability Option
  - Fragmentation ACK Parameters
  - MAX_ACK_REQUEST
  - FCN
  - DTag
- We used https://mailarchive.ietf.org/arch/msg/lp-wan/SexnleQwBTL7XZ9-hC2h7tp79KU; update needed.