

LPWAN WG

WG Chairs:

Alexander Pelov <a@ackl.io>

Pascal Thubert <pthubert@cisco.com>

AD: Suresh Krishnan
<suresh@kaloom.com>

Note Well

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Reminder:

Minutes are taken *

This meeting is recorded **

Presence is logged ***

- * Scribe; please contribute online to the minutes at: <http://etherpad.tools.ietf.org:9000/p/lpwan>
- ** Recordings and Minutes are public and may be subject to discovery in the event of litigation.
- *** From the Webex login

Agenda bashing

- 16:05> Opening, agenda bashing (Chairs) [10min]
- Note-Well, Scribes, Agenda Bashing
 - Approval minutes from last meeting
 - Review last interim todos
 - Terminology
- 16:15> LPWAN Overview Presentation and Discussion (Stephen Farrel) [5min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-overview/>
 - WGLC
- 16:20> Static Context Header Fragmentation (Carles) [10min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-ipv6-static-context-hc/>
- 16:30> Static Context Header Compression for IPv6 and UDP (Ana, Laurent) [10min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-ipv6-static-context-hc/>
- 16:40> LPWAN Static Context Header Compression (SCHC) for CoAP (Laurent) [10min]
- <https://datatracker.ietf.org/doc/draft-ietf-lpwan-coap-static-context-hc/>
- 16:50> New Items (Ana) [10min]
- 17:00> AOB [QS]

Status

WG formed October 14th

- Charter item #1 (Informational document)
 - Baseline technology description
- Charter item #2 (Standards track document)
 - Enable the compression and fragmentation of a CoAP/UDP/IPv6 packet over LPWA networks

Charter - Milestones

Milestones

Date ⇄ **Milestone**

Jul 2017 Submit CoAP compression mechanism to the IESG for publication as a Proposed Standard

May 2017 Submit IP/UDP compression and fragmentation mechanism to the IESG for publication as a Proposed Standard

Apr 2017 Submit LPWAN specification to the IESG for publication as an Informational Document

Done Adopt CoAP compression mechanism as a WG item

Done Adopt IP/UDP compression and fragmentation mechanism as a WG item

Done Adopt LPWAN specifications as WG item

Last meeting Action items

- ~~JCZ, DD: Review IP/UDP drafts~~
- CB, MV: Review CoAP draft
- ~~SF: Send revision, WG to review by May, 30th~~
- ~~CG: CFN/AFN, new ideas around fragmentation~~
- CG: Default fragmentation mode (Window mode)

LPWAN Overview

Editor: Stephen Farrell
(many contributors)

Terminology

- **WG call started on Monday, 19**
 - Ends in 2 weeks, July 3rd

LPWAN SCHC Fragmentation

Authors:

Ana Minaburo <ana@ackl.io>

Laurent Toutain <laurent.toutain@imt-atlantique.fr>

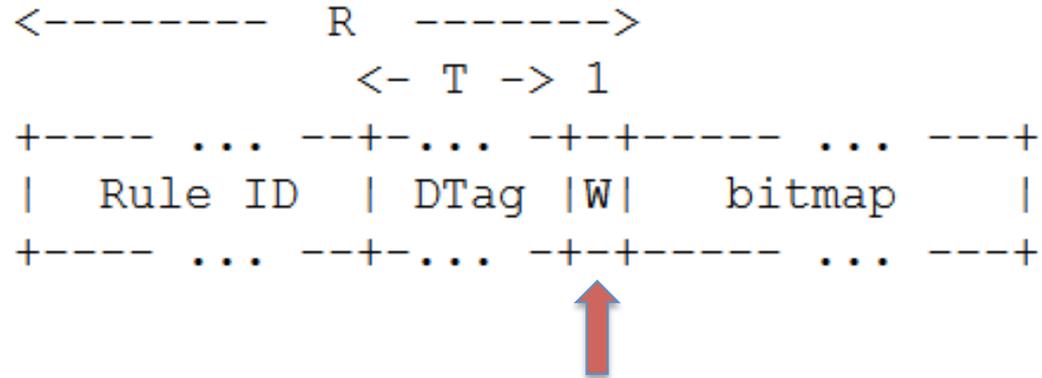
Carles Gomez <carlesgo@entel.upc.edu>

Status

- Updates since the last interim (7th June)
- Available in -04
- Thanks for the input/feedback!

W bit in ACKs

- Needed to allow a sender always know what is being ACKed
- Format



Bitmap feedback for last frag

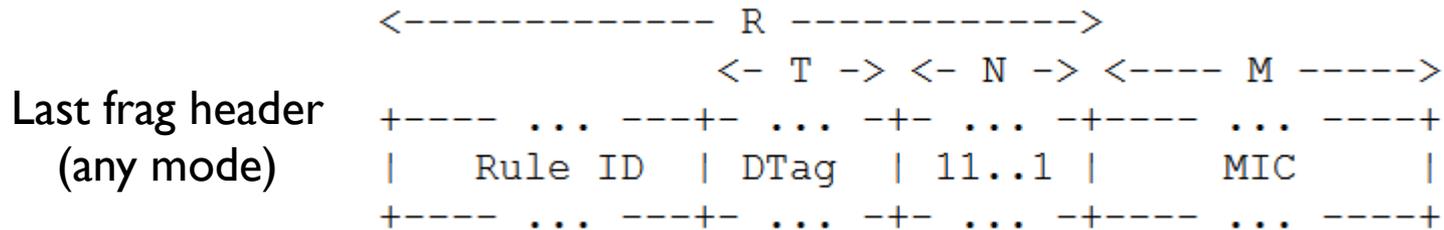
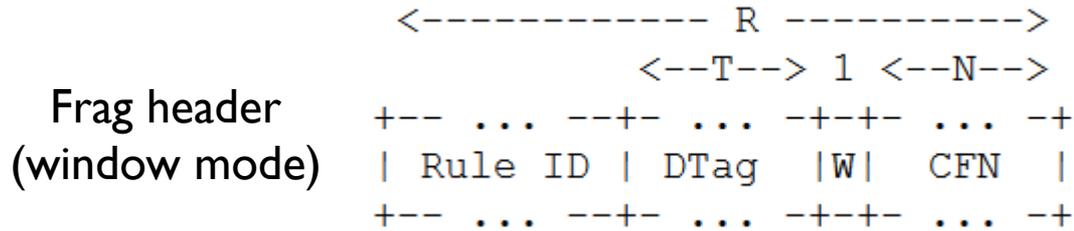
- Frag $CFN=2^N - 1$
 - Feedback only given by last bit of the corresponding bitmap

Sender	Receiver
-----W=1, CFN=6----->	
-----W=1, CFN=5----->	
-----W=1, CFN=4--X-->	
-----W=1, CFN=3----->	
-----W=1, CFN=2--X-->	
-----W=1, CFN=1----->	
-----W=1, CFN=0----->	
<-----ACK, W=1-----	bitmap:11010111
-----W=1, CFN=4----->	
-----W=1, CFN=2----->	
<-----ACK, W=1-----	no bitmap
-----W=0, CFN=6----->	
-----W=0, CFN=5----->	
-----W=0, CFN=4--X-->	
-----W=0, CFN=7----->	MIC checked
<-----ACK, W=0-----	bitmap:11000001
-----W=0, CFN=4----->	MIC checked =>
<-----ACK, W=0-----	no bitmap

(End)

W bit for last frag ? (I/II)

- Current formats



W bit for last frag ? (II/II)

- Not strictly needed
 - Last frag cannot be confused by a receiver as belonging to the previous window
- More uniform format
 - Same fields in all fragmentation headers (window mode) except the MIC
- One bit less for Rule ID in last frag
 - Would it be “used” anyway?

Thanks!

Comments?

Authors:

Ana Minaburo <ana@ackl.io>

Laurent Toutain <laurent.toutain@imt-atlantique.fr>

Carles Gomez <carlesgo@entel.upc.edu>

LPWAN CoAP SCHC

Authors:

Ana Minaburo <ana@ackl.io>

Laurent Toutain <laurent.toutain@imt-atlantique.fr>

SCHC Compression

- Padding

- IF the compressed header is not byte boundary, two choices:

- Put padding after compressed header, before data



- Put padding after data



New Items

Ana Minaburo

New Items (Answers on ML)

- ICMP Compression
- SCHC over Foo
 - Profile Technologies. Develop the different document for each technology in order to define the different parameters.
- Security, all the security solution for the LPWAN
- Rules-ID's management – Use to identify some specific cases:
 - Fragmentation
 - Format Values
 - Rule-IDs dedicated for some specific cases as CBOR structure representation, fragmentation, etc
 - The way to use the Rule-Id and their configuration
- YANG data modeling for SCHC

Next steps (prev. call)

- YANG data modeling for SCHC
- Profile Technologies. Develop the different document for each technology in order to define the different parameters.
- Security, all the security solution for the LPWAN
- Rules-ID's management
 - Use to identify some specific cases:
 - Fragmentation
 - Format Values
 - Rule-IDs dedicated for some specific cases as CBOR structure representation, fragmentation, etc
 - The way to use the Rule-Id and their configuration
- ICMP Compression