

# LPWAN WG

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[BCP 54](#) (Code of Conduct)

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[BCP 79](#) (Patents, Participation)

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I E T F

## Reminder:

Minutes are taken \*  
This meeting might be recorded \*\*  
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\* Please contribute to the minutes at: <https://notes.ietf.org/notes-ietf-interim-2022-lpwan-06-lpwan#>

\*\* Recordings and Minutes are public and may be subject to discovery in the event of litigation.

\*\*\* Automatically captured from Meetecho attendance

# Agenda bashing

[16:05]	Administrivia	[10min]
	Note-Well, Scribes, Agenda Bashing WG Status	
[16:15 ]	Data Model Shepherding	[15mn]
	Dominique's review Pascal's review Expressing timeouts as mantissa + exponent impacts on Architecture	
[16:40]	Compound Ack Shepherding	[10min]
	Alexander's report	
[16:50]	SCHC o' SigFox Shepherding	[5min]
	Ana's report	
[16:55]	AOB	[ QS ]

# Action items

Progress 3 drafts to submission:

- Complete Shepherd writeup for Compound Ack
- Complete WGLC resolutions for Yang Data Model (call ended March 15 on version 07)
- Kick off WGLC for SCHC over SigFox

# WG Status

## Milestones

Date ↕ Milestone

Dec 2022 Produce a Standards Track document to enable operations, administration and maintenance (OAM) to the LPWAN device, including support for delayed or proxied liveness verification (Ping)

Feb 2022 Produce a Standards Track document for SCHC over NBIOT  
[draft-ietf-lpwan-schc-over-nbiot](#)

Oct 2021 Produce a Standards Track document for SCHC over SigFox  
[draft-ietf-lpwan-schc-over-sigfox](#)

Feb 2021 Produce a Standards Track document to define the generic data models to formalize the compression and fragmentation contexts for LPWANs

Dec 2020 Produce Standard Track documents to apply SCHC IPv6/UDP over the baseline technologies

May 2020 Perform SCHC Maintenance, including enabling SCHC mechanisms for Upper layer Protocols

# Document advancement

Document	Date	Status	IPR	AD/Shepherd
<b>Active Internet-Drafts (5 hits)</b>				
<a href="#">draft-ietf-lpwan-architecture-01</a> LPWAN Static Context Header Compression (SCHC) Architecture	13 pages 2021-11-26	I-D Exists WG Document : Informational		
<a href="#">draft-ietf-lpwan-schc-compound-ack-04</a> SCHC Compound ACK	12 pages 2022-03-21	I-D Exists WG Document : Proposed Standard		<a href="#">Alexander Pelov</a>
<a href="#">draft-ietf-lpwan-schc-over-nbiot-07</a> SCHC over NB-IoT	20 pages 2022-02-22	I-D Exists In WG Last Call : Proposed Standard Feb 2022		<a href="#">Éric Vyncke</a> <a href="#">Pascal Thubert</a>
<a href="#">draft-ietf-lpwan-schc-over-sigfox-09</a> SCHC over Sigfox LPWAN	30 pages 2022-02-22	I-D Exists WG Document : Proposed Standard Oct 2021		<a href="#">Éric Vyncke</a> <a href="#">Ana Minaburo</a>
<a href="#">draft-ietf-lpwan-schc-yang-data-model-09</a> Data Model for Static Context Header Compression (SCHC)	53 pages <b>2022-05-16</b>	I-D Exists In WG Last Call : Proposed Standard Review: <a href="#">yangdoctors</a>	<b>New</b>	<a href="#">Éric Vyncke</a> <a href="#">Pascal Thubert</a>
<b>RFCs (4 hits)</b>				
<a href="#">RFC 8376</a> (was <a href="#">draft-ietf-lpwan-overview</a> ) Low-Power Wide Area Network (LPWAN) Overview	43 pages 2018-05	Informational RFC		<a href="#">Suresh Krishnan</a> <a href="#">Alexander Pelov</a>
<a href="#">RFC 8724</a> (was <a href="#">draft-ietf-lpwan-ipv6-static-context-hc</a> ) SCHC: Generic Framework for Static Context Header Compression and Fragmentation	71 pages 2020-04	Proposed Standard RFC		<a href="#">Suresh Krishnan</a> <a href="#">Pascal Thubert</a>
<a href="#">RFC 8824</a> (was <a href="#">draft-ietf-lpwan-coap-static-context-hc</a> ) Static Context Header Compression (SCHC) for the Constrained Application Protocol (CoAP)	30 pages 2021-06	Proposed Standard RFC		<a href="#">Éric Vyncke</a> <a href="#">Pascal Thubert</a>
<a href="#">RFC 9011</a> (was <a href="#">draft-ietf-lpwan-schc-over-lorawan</a> ) Static Context Header Compression and Fragmentation (SCHC) over LoRaWAN	26 pages 2021-04	Proposed Standard RFC	<b>1</b>	<a href="#">Éric Vyncke</a> <a href="#">Dominique Barthel</a>
<b>Related Internet-Drafts (2 hits)</b>				
<a href="#">draft-barthel-lpwan-oam-schc-03</a> OAM for LPWAN using Static Context Header Compression (SCHC)	14 pages 2022-02-09	I-D Exists		
<a href="#">draft-martinez-lpwan-meshed-rules-00</a> Can Rules be adapted to a Meshed environment	4 pages 2022-03-21	I-D Exists		

# Data Model for SCHC Shepherding

[draft-ietf-lpwan-schc-yang-data-model](#)  
shepherd: [Pascal Thubert](#)



# Dominique's review

# Pascal's review

- 1) Dominique raised the point of the range and definition of time. 64 bits seems a waste of room that implementations will be compelled to use.
- 2) About implementations: RFC 7942 suggests that a small section indicates the existing implementations of the draft. Can you please do that?
- 3) Acknowledgements: please do not forget your beloved YANG doctor in the ack section.
- 4) The BCP 14 text appears in the YANG module in section 7. Suggestion to move it up earlier in the document, call it “Requirements Language” and place it before section 2 where “MUST” is already being used.  
See e.g., <https://datatracker.ietf.org/doc/html/rfc8931#section-2.1>
- 5) ID nits says that there are 5 instances of too long lines in the document, the longest one being 29 characters in excess of 72.
- 6) Shouldn't there be at least an informational reference to what YANG is?

# Expressing timeouts as mantissa + exponent

Laurent: To help tomorrow discussion I pushed in the repository a small Python script to compute timer range regarding the exponent.

<https://github.com/lp-wan/datamodel/blob/master/ticks.py>

exp	smallest value / step	highest value
00	00000y 000d 00h 00m 00s.000001 <-> 00000y 000d 00h 00m 00s.065534	
01	00000y 000d 00h 00m 00s.000002 <-> 00000y 000d 00h 00m 00s.131069	
02	00000y 000d 00h 00m 00s.000004 <-> 00000y 000d 00h 00m 00s.262139	
03	00000y 000d 00h 00m 00s.000008 <-> 00000y 000d 00h 00m 00s.524279	
..		
13	00000y 000d 00h 00m 00s.008192 <-> 00000y 000d 00h 08m 56s.862719	
14	00000y 000d 00h 00m 00s.016384 <-> 00000y 000d 00h 17m 53s.725439	
..		
19	00000y 000d 00h 00m 00s.524288 <-> 00000y 000d 09h 32m 39s.214079	
20	00000y 000d 00h 00m 01s.048575 <-> 00000y 000d 19h 05m 18s.428159	
21	00000y 000d 00h 00m 02s.097151 <-> 00000y 001d 14h 10m 36s.856319	
22	00000y 000d 00h 00m 04s.194303 <-> 00000y 003d 04h 21m 13s.712639	
23	00000y 000d 00h 00m 08s.388607 <-> 00000y 006d 08h 42m 27s.425279	
24	00000y 000d 00h 00m 16s.777215 <-> 00000y 012d 17h 24m 54s.850559	
25	00000y 000d 00h 00m 33s.554431 <-> 00000y 025d 10h 49m 49s.701119	
..		
34	00000y 000d 04h 46m 19s.869183 <-> 00035y 256d 01h 12m 06s.973439	
35	00000y 000d 09h 32m 39s.738367 <-> 00071y 147d 02h 24m 13s.946879	
...		
53	00285y 224d 23h 47m 34s.740991 <-> 18717871y 269d 17h 10m 50s.875000	
54	00571y 084d 23h 35m 09s.481983 <-> 37435743y 174d 10h 21m 41s.750000	

# SCHC Compound Ack Shepherding

[draft-ietf-lpwan-schc-compound-ack](#)

Shepherd: [Alexander Pelov](#)

# SCHC over Sigfox Shepherding

[draft-ietf-lpwan-schc-over-sigfox](#)

Shepherd: [Ana Minaburo](#)

# Statements

- Finishing my Review
  - Send comments to authors (end of the week)
- Follow the procedure (after this meeting)
  - Ask for IPRs
  - Fill the write up

# First Questions

- Downlink transmission
  - Does it correspond to the Appendix F RFC8724 “ACK-Always and ACK-on-Error on Quasi-Bidirectional Links”?
  - If yes: Verify that it conforms
- Use of Dtag = 0
  - Only 1 packet on air or
  - Probably increase the number of RuleIDs

# Thanks



**AOB ?**