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: https://etherpad.tools.ietf.org/p/lpwan
** Recordings and Minutes are public and may be subject to discovery in the event of litigation.
*** From the Webex login

Interim, November 7th, 2017
## Agenda bashing

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Duration</th>
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<tbody>
<tr>
<td>17:05</td>
<td>Opening, agenda bashing (Chairs)</td>
<td>10mn</td>
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<tr>
<td></td>
<td>• Note-Well, Scribes, Agenda Bashing, Approval minutes from last meeting</td>
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<td></td>
<td>• Review todo</td>
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<td></td>
<td>• Status of drafts</td>
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<tr>
<td>17:15</td>
<td>Preparation for IETF 100</td>
<td>30mn</td>
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<tr>
<td>17:45</td>
<td>Fragmentation comments (Carles)</td>
<td>10mn</td>
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<tr>
<td>17:55</td>
<td>AOB</td>
<td>5mn</td>
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</tbody>
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Interim, November 7th, 2017
Last meeting Action items

• LPWAN Overview
  – Shepherd write-up

• Time scale draft submitted to CoRE
IETF 100 Preparation

The Chairs
Interim, November 7th, 2017

IETF 100

* [09:30] Administrivia
  o Note-Well, Scribes, Agenda Bashing
  o Status of drafts (WGLC / forthcoming WGLC) [20min]

* [09:50] draft-ietf-lpwan-overview
  o LPWAN Overview - Doc status and updates [10min]

* [10:00] draft-ietf-lpwan-ipv6-static-context-hc
  o Update on IPv6 compression [10min]
  o Update on SCHC fragmentation [20min]

* [10:30] draft-ietf-lpwan-coap-static-context-hc [10min]

* [10:40] draft-barthel-icmpv6-schc [10min]

* [10:50] draft-petrov-lpwan-ipv6-schc-over-lorawan [15min]

* [11:05] draft-zuniga-lpwan-schc-over-sigfox [15min]


* [11:50] AOB [10min]
Fragmentation Discussion Group

• Tuesday
  – 14:30->17:00

• Hullet Room
LPWAN SCHC Fragmentation

Authors:
Ana Minaburo <ana@ackl.io>
Laurent Toutain <laurent.toutain@imt-atlantique.fr>
Carles Gomez <carlesgo@entel.upc.edu>

Interim, November 7th, 2017
Problem

• Downlink fragmentation and ACK Always
  – In some technologies, an uplink message is required prior to the transmission of X downlink messages
  – E.g. X=1

If ACK lost, neither the next fragments (if any) nor the “ACK request” can be sent
Proposed solution (I)

- The fragment receiver MAY support timer-based ACK retransmission
- A fragment receiver transmits an ACK. Then:
  - It initializes and starts the ACK Retry timer
    - Except for an ACK sent in response to the last frag of the packet confirming the last window has been correctly received
  - If a frag of the next window or a missing frag from current window arrives before timer expiration
    - Timer is stopped
  - If the timer expires
    - The ACK is resent and the timer is reinitialized and restarted
Proposed solution (II)

- **Fragment sender**
  - Transmits the last fragment
  - Initializes its ACK Always timer to a long value
    - “Long value”: e.g. several times the ACK Retry timer
  - If ACK received before timer expiration
    - Sender proceeds normally (e.g. resend any lost fragments)
  - If timer expires and no ACK received
    - Sender assumes its last fragment (and the whole last window) had been successfully received, and last ACK has been lost (most likely)
    - Otherwise, up to several ACK retries performed (unlikely that all fail)
Thanks!

Comments?

Authors:
Ana Minaburo <ana@ackl.io>
Laurent Toutain <laurent.toutain@imt-atlantique.fr>
Carles Gomez <carlesgo@entel.upc.edu>
AOB?