23 September 2016 Webex

IPv6 over the TSCH mode of IEEE 802.15.4e

Chairs:
 Pascal Thubert
 Thomas Watteyne
Etherpad for minutes:
 http://etherpad.tools.ietf.org:9000/p/6tisch?useMonospaceFont=true

Note Well

This summary is only meant to point you in the right direction, and doesn't have all the nuances. The IETF's IPR Policy is set forth in BCP 79; please read it carefully.

The brief summary:
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- You understand that meetings might be recorded, broadcast, and publicly archived.

For further information, talk to a chair, ask an Area Director, or review the following:
- BCP 9 (on the Internet Standards Process)
- BCP 25 (on the Working Group processes)
- BCP 78 (on the IETF Trust)
- BCP 79 (on Intellectual Property Rights in the IETF)

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/6tisch?useMonospaceFont=true
** Recordings and Minutes are public and may be subject to discovery in the event of litigation.
*** From the Webex login

Agenda

- Administrivia [3min]
    - Agenda bashing
    - Approval minutes from last meeting
    - IETF status
    - Bootstrap Design team details
- Working with IEEE802 (chairs) [5min]
    - Assignments
- 6top protocol [10min]
    - agreeing on action items, milestones and next steps
        - Receiver Initiated 6P Transactions
        - Receiver 6P Cell Suggestion
        - dynamic number of cells in repl
- Next steps for SF0 [30min]
    - Target? Experimental?
    - Status and next steps
    - Cell allocation Scheme
- AOB [2min]

Administrivia

Admin is trivia

- Approval Agenda
- Approval minutes

Milestones updated

Milestones

Date	Milestone
Dec 2017	6TiSCH architecture and terminology in RFC publication queue
Apr 2017	Initial submission of 6TiSCH architecture to the IESG draft-ietf-6tisch-architecture
Apr 2017	Initial submission of 6TiSCH terminology to the IESG draft-ietf-6tisch-terminology
Dec 2016	Evaluate WG progress, propose new charter to the IESG
Dec 2016	Initial submission of draft-ietf-6tisch-6top-sf0 to the IESG
Dec 2016	Initial submission of draft-ietf-6tisch-6top-sublayer to the IESG draft-ietf-6tisch-6top-protocol
Done	ETSI 6TiSCH #3 plugtests
Done	WG call to adopt draft-ietf-6tisch-6top-sublayer draft-ietf-6tisch-6top-protocol
Done	WG call to adopt draft-ietf-6tisch-6top-sf0
Done	Second submission of draft-ietf-6tisch-minimal to the IESG draft-ietf-6tisch-minimal

News from I-Drafts [1/2]

6LoRH was split in 2

- draft-ietf-6lo-paging-dispatch

- draft-ietf-roll-routing-dispatch

The paging dispatch is being reviewed by the IESG, scheduled for a telechat, RFC number approaching. That's just the 16 pages thing to increase dispatch space

The real meat of 6LoRH is finalized at ROLL. The routing dispatch 01 was published, addressing the routing area review by Alvaro (AD). Expectation is that Alvaro will push the draft to IESG soon

News from I-Drafts [2/2]

For the RPL usage draft

  draft-ietf-roll-useofrplinfo is now WG doc

For the 6TiSCH minimal draft, waiting on
  Suresh (INT area AD)

6TiSCH bootstrap design team

- Meets every 2ⁿᵈ Tuesday at 1400UTC (10am Eastern)

- Via https://jitsi.tools.ietf.org/6tischSecurity

- Team members:
  - Michael Richardson,
  - Francesca Palombini,
  - Tero Kivinen,
  - Malisa Vucinic
  - Goran Selander,
  - Nancy Cam-Winget
  - (chairs: Thomas and Pascal)

Meeting dates:
2016-09-13,
2016-09-27,
2016-10-11,
2016-10-25

Working with IEEE802

News from assignments

- 6LoWPAN
  - draft-ietf-6lo-ethertype-request
  - IESG completing a liaison to IEEE
  - To be issued soon

- IETF IE for 802.15.4
  - IESG completing a request to IEEE
  - 802.15.4 (Bob) well-aware
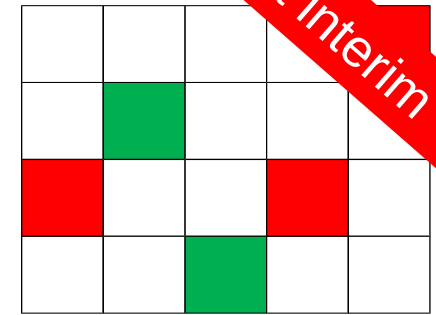
draft-ietf-6tisch-6top-protocol

last steps 6top-protocol

- Receiver Initiated 6P Transactions
- Receiver 6P Cell Suggestion
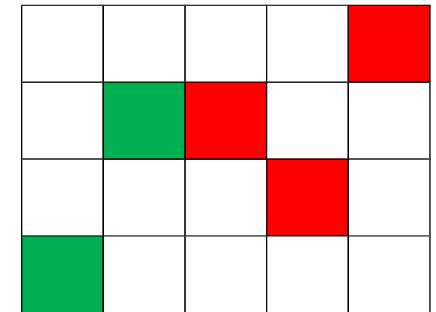- Dynamic number of cells in response

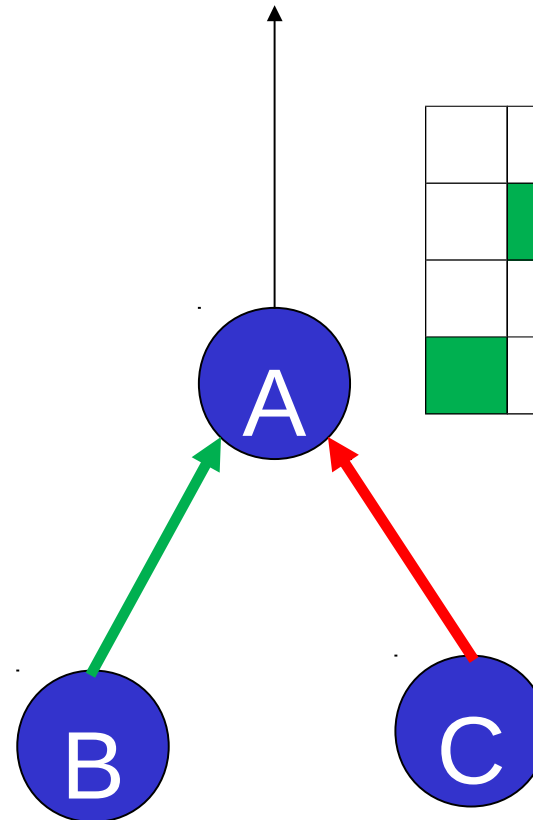# Receiver Initiated 6P Transactions
Proposal 1/2

- Receiver might want to "defragment" its schedule

- Receiver can initiate the 6P transaction

- TX/RX flag in 6P message?

before

after

Receiver 6P Cell Suggestions
Proposal 2/2

- When an 6P ADD command fails, today the transmitter has to "guess" at new cells to suggest.

- It might take multiple (failed) 6P ADD transactions before finding the right cells

- On a failed 6P ADD, could the receiver side not use the 6P response to suggest a number of cells that would work?

draft-ietf-6tisch-6top-sf0

SF0: what's next

- Important questions to answer
  - See next slides
- Important design points
  - See next slides
- Importance of evaluation
  - Difference between experimental and std track
- Cell allocation mechanism
  - Where do they come from?
  - Detail Xavi's minimal method in SF0?

Trivial/Simple Changes

- issue tracking
  - This is now a WG doc. Per the 6TiSCH best practice, this means issues should be tracked by https://trac.tools.ietf.org/wg/6tisch/trac/report/
- nits and typos
  - "and determine" -> "and determines"
  - re-allocation-> relocation
  - dissappears -> disappears
  - 6P ALL Request -> 6P ADD Request?
- Editorial
  - the many acronyms (BEA, COBU, NIBR,NOB, AP, etc) add confusion more than clarity. Can we not simply talk about "incoming", "outgoing" and "generated"?
  - isn't "NOB=NIBR-COBU", not "NOB=COBU+NIBR"
  - the draft starts very abruptly by referencing triggering events, BEA and allocation policy in the "Rules for Adding/Deleting Cells" Section. "Overview" section?
  - "The SF0 Allocation Policy" figure

Important Questions

- Whitelist / Blacklist?

- Calculation of timeout

- Use of metadata?

- the term bandwidth is confusing. Is it a number of packets per second? per frame? a number of cells?

- Is using bandwidth+PDR the right way? Wouldn't cells me simpler?

Evaluation

- SF0 is critical to the performance of 6TiSCH (~OF in RPL)
- We need to find a balance between:
  - It's simple
  - It performs reasonably well
- → The draft must contain elements that show that "it works"
  - Difference between std track and experimental

- "Performance Evaluation" section
  - Simulations (e.g. on 6TiSCH simulator https://bitbucket.org/6tisch/simulator/src)
  - Experimentation (e.g. on OpenWSN www.openwsn.org)
  - Analysis?

- That could contain a "call for performance evaluation" in some version

AOB ?

Thank you!