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RIOT OS @ T2TRG

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Outline

1. IEEE 802.15.4 Compliance

2. 6Lo-ND (RFC 6775)

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IEEE 802.15.4 Compliance

- Background: discussion on IEEE 802.15.4 compliance started 2017-09-17 on devel mailing list[1]
- RIOT currently supports: Beacon, Data and ACK frames
  - IEEE802.15.4-2015: **reduced support** requires also "certain command frames" (channel scan, assoc. with coordinator)
- Current state of discussion: we want it, but optional

[1] https://lists.riot-os.org/pipermail/devel/2017-September/005335.html

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1. IEEE 802.15.4 Compliance

2. 6Lo-ND (RFC 6775)

6Lo-ND (RFC 6775)

- Starting point (from an engineering perspective):
  - RIOT wants support more then just IEEE 802.15.4 (or other 6lo-featured link layers), e.g. Ethernet
  - RIOTers hate code duplication

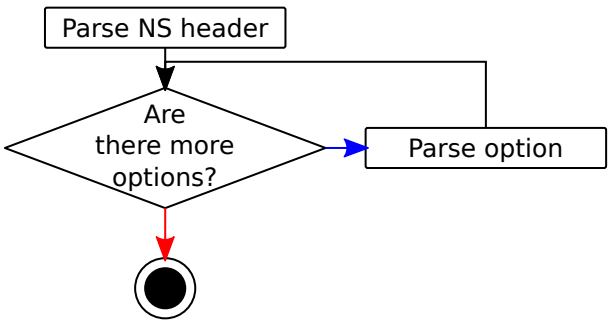
$\Rightarrow$ RFC 6775 code is mixed with RFC 4861 code

- Other discussions:
  - Do we need NDP if we have (a slightly modified) RPL + assume reverse EUI-64 discussion?
  - Which device type is more prevalent in a typical 6LoWPAN? 6LR or non-routing 6LN?

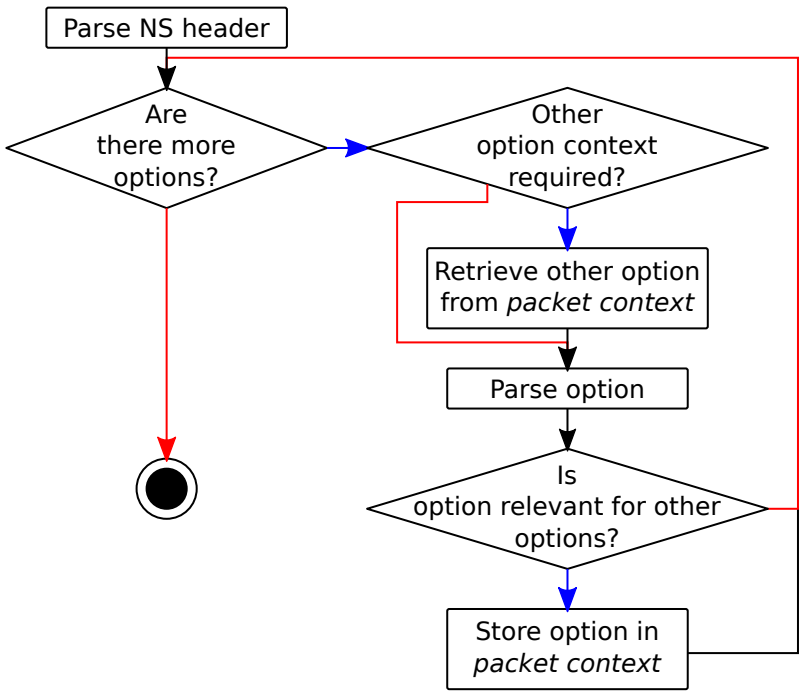
6Lo-ND's Complexity

- NDP itself already complex (encompasses address resolution, router discovery, stateless address configuration, ...)
- Main problem with 6Lo-ND: Lot's of options depend on each other (e.g. ARO + SLLAO, ABRO + PIO + 6CO)

RFC 4861



RFC 6775



Is 6775-bis any better?

- EARO still dependent on SLLAO (won't change) in link-local NS
- RS/RA-behavior not defined (beyond 6CIO)
  - (use RPL? But then: were do compression contexts come from)
- RFC-6775-compliant implementation still required