

# A DODAG Metric Used for DODAG Selection in LLNs

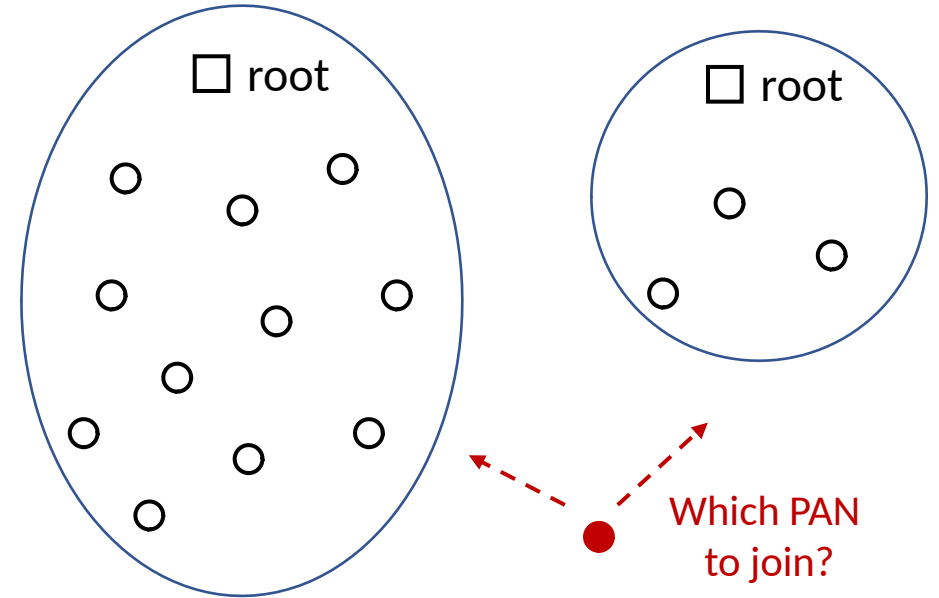
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# Motivation

- LLNs consists of a border router (root) and nodes
  - Limited nodes managed by a root
  - Load balance
- Which DODAG to join for a new node?
  - Already exist: Link ETX
  - **Missing: DODAG size**







# DODAG size object

- DODAG size object format
  - Extends RFC 6551

| 8 bits | 5         | 1 | 1 | 1 | 1 | 3 | 4    | 8              | 16         |
|--------|-----------|---|---|---|---|---|------|----------------|------------|
| Type   | Res Flags | P | C | O | R | A | Prec | Length (bytes) | DODAG size |

- Type: 9 (suggested)
- Flags:
  - $P = 0, C = 0, O = 0, R = 1, A = 0$
  - Prec: useful when a DAG Metric Container contains several Routing Metric objects. Its value ranges from 0 to 15. The value 0 means the highest precedence.
  - Length: 2

# Disseminate DODAG Size

- DODAG size
  - Collected by the root
  - Periodically disseminated to nodes in the PAN
- Two ways to disseminate DODAG Size
  - DIO
  - DAO-ACK