Routing Requirements for 6Lo WPAN

draft-dokaspar-6lowpan-routreq

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6lowpan

- Properties: low power, low rate, low cost…
  - ➔ Based on IEEE 802.15.4 standard
- Special requirements:
  - Power conservation
  - Low protocol complexity
    - Tiny device with tiny memory (and/or) tiny processor
  - "Very high scalability", …
- IETF-68 6lowpan WG meeting:
  - High interest about 6lowpan mesh routing
  - No clear conclusion yet
    - "Architecture" document?
    - Routing Requirements document?
    - General Guidelines / Best Practices?

Routing Requirements List

General Requirements:

- Layer Transparency, Gateways
- Robustness despite hibernating nodes
- Local and Global Mobility
- High Scalability
- Secured control messages
- Bootstrapping

Special to 6LoWPAN:

- Reusing MANET Protocols
- Adaptation Layer Routing
- No PHY frame fragmentation of control messages
- 16 bit and 64 bit Addressing
- Local repair MAY be omitted
- ND without "Hello" Messages (L2-mechanisms)
- Low Protocol Complexity
- Low Routing State
- Short code length

MANET

- Can MANET routing protocols be reused f or 6lowpan?
  - Which one(s)?
  - How?
  - For which scenarios?

- Any feedback?
- Any comments?
- Any questions?