

Ideas on
MANET WG Future Work

Gauging interest

Future Work - Intro

Work Items in current WG Charter:

- Develop a dynamic link exchange protocol (DLEP)
- DLEP extension to provide a credit-windowing scheme for destination-specific flow control
- DLEP extensions for reporting statistics by traffic classification
- Multicast MANET protocol framework based on Simplified Multicast Forwarding [RFC 6621] for scoped forwarding within MANET networks. As part of this framework the WG will produce a well defined MANET multicast forwarding information base (FIB)
- Document outlining challenges and best practices for deploying and managing MANET networks

and:

- The MANET WG is responsible for the maintenance of OLSRv2 [RFC 7181], NHDP [RFC 6130] and the Generalized MANET Packet/Message Format [RFC5444], and their extensions
 - RFC 7779 (Directional Airtime Metric for OLSRv2, Experimental) to Standards Track?
 - RFC 7722 (Multi-topology Extension for OLSRv2, Experimental) to Standards Track?

Not in scope of current charter:

- Inter-MANET Routing (<https://datatracker.ietf.org/doc/slides-105-manet-inter-manet-routing/>)

OLSRv2 Maintenance

- Henning Rogge recently found a problem where OLSRv2 routers were unable to rejoin the network after a restart, due to an unlucky pick of Advertised Neighbor Sequence Number (ANSN); see https://mailarchive.ietf.org/arch/msg/manet/I23DP2oUVQA5VL_nJwGjMCMmFvU/
- ML discussion ongoing, with Justin Dean and Christopher Dearlove
- Possible outcome: an Informational RFC
 - Changes to the protocol currently not deemed necessary

Multicast in MANETs

- RFC 6621 (Experimental) SMF: smart flooding rather than multicast routing
 - No group membership state maintained at ad hoc routers
- **MANET multicast forwarding information base (FIB)**
 - See <https://www.ietf.org/proceedings/96/slides/slides-96-manet-1.pdf>
 - No protocol elements?
- Elastic Multicast Routing Protocol: <https://datatracker.ietf.org/doc/draft-adamson-elasticmcast-00.txt>
 - Expired I-D, 2013, Brian Adamson, NRL
- On-Demand Multicast Routing Protocol (ODMRP), see <https://www.ietf.org/proceedings/89/slides/slides-89-manet-1.pdf>
- BIER ?
- Anyone (else) willing to work on MANET multicast routing?

Managing MANET networks

- Charter Work Item: “Document outlining challenges and best practices for deploying and managing MANET networks”
 - Would like to get rid of this item, since I do not believe those running MANETs ‘in the wild’ will come forward to provide input on this
- Anyone interested in writing YANG models for MANET protocols?
 - MIBs exist, e.g. RFC 7184, *Definition of Managed Objects for the Optimized Link State Routing Protocol Version 2*