

# Manet Proactive Routing Protocol

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# Work Item Goals

- Develop proactive unicast routing protocol
- Unencumbered protocol
  - No IPR-issues on base-line specification.
- Include gateway operation
- “Extensible where sensible”
  - (thanks Joe...)

# WG Approach (1)

- Based on lessons learned from RFCs, IDs:
  - local signaling:
    - bidirectionality check;
    - topology maintenance.
  - global signaling through optimized multicast:
    - ▶ reduce cost of performing a MANET-wide multicast.
  - partial topology:
    - ▶ reduce the # of MANET-wide multicasts.

# WG Approach (2)

- Procedure:
  - establish small design-team;
  - open process – frequent reporting to WG;
  - quick release of initial spec.;
  - emphasis on running code;
  - stable ID within “about a year”;
  - aim: std. track specification.

# Key Design/Implementation Issues

- Wire formats:
  - potentially common framework for proactive/reactive;
  - extensible, sensible treatment of extensions by ignorant nodes;
    - e.g. “process”, “drop”, “forward”, ....
- Algorithms:
  - bi-directional links;
  - multiple-interface support;
  - simple partial link-state diffusion;
  - proactive – but sensibly address network-events;
  - FSR, Fuzzy-sighted link-state, MHGR, ... ↗ extensions.

# Extensions

- Specifics:
  - NOT part of base-spec;
  - enabled by base-spec – requirements may guide, not dictate, base-spec design.
- Examples (non-exhaustive):
  - Clustering support,
  - FSR/Fuzzy-sight/MGHR,
  - QoS – link/node metrics,
  - Proactive/reactive network interoperability,
  - ....