Ad-Hoc On-Demand Distance Vector Routing

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Updates to AODV

- **New extensions to RREQ for QoS**
  - **Allowable Delay, decremented per hop**
  - **Bandwidth, stored with route entry**
- **Prefix length, to be used by** $subnet\ leader$
- **Reduced reliance on** $hello$ **message, in many cases**
- **Ad-Hoc network** may **be used to connect other networks**
- **New parameter values as shown by experience**
  - **retries, broadcast_id, ...**
- **Local repair**

AODV Multicast Route Discovery

Message types:

- **RREQ, with flags 'J' (*Join*) and 'R' (*Repair*)**
- **RREP, with flags 'R' (*Repair*) and 'U' (*Update*)**
- **MACT, with flags 'P' (*Prune*) and 'G' (*Group Leader*)**

Multicast groups build trees to connect members
Multicast Group Leader maintains multicast group sequence number

Updates to Multicast for AODV

- **MINV message -> MACT (Multicast Activation) message**
- **MACT format**
  - **addition of 'P' and 'G' flags**
  - **removal of HopCount and NextHop fields**
- **Branch additions to multicast tree chosen by freshest multicast group sequence number and smallest hop count to next group member**
- **Route rebuilding after network partition can only be attempted by a multicast tree member**
- **After a group leader change, set 'U' ($update$) flag in next Group Hello**