
IMPROVED COMMUNITY NETWORK NODE DESIGN

... using a DLEP based Radio-to-Router Interface

Barcelona, 8. October 2012



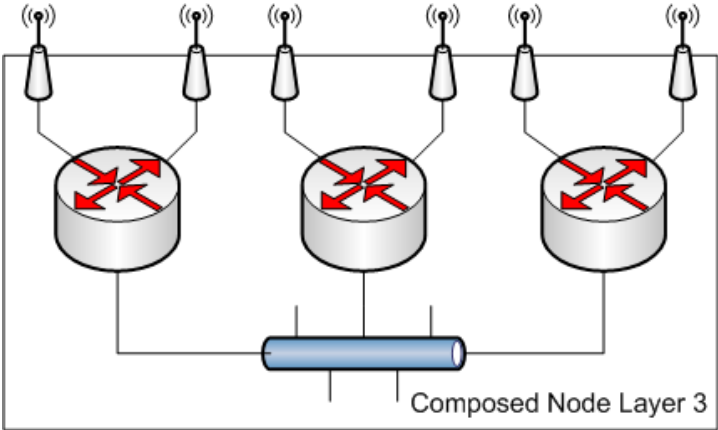
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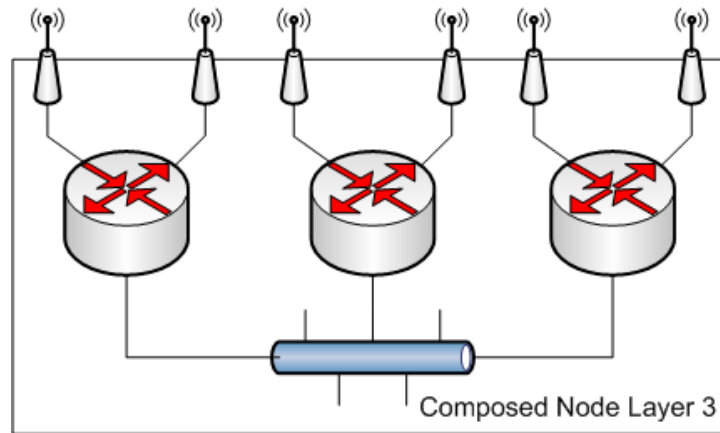
AGENDA

- New Community Network Node Design
- Radio to Router Communication
- Stable API

Community Network Node Design



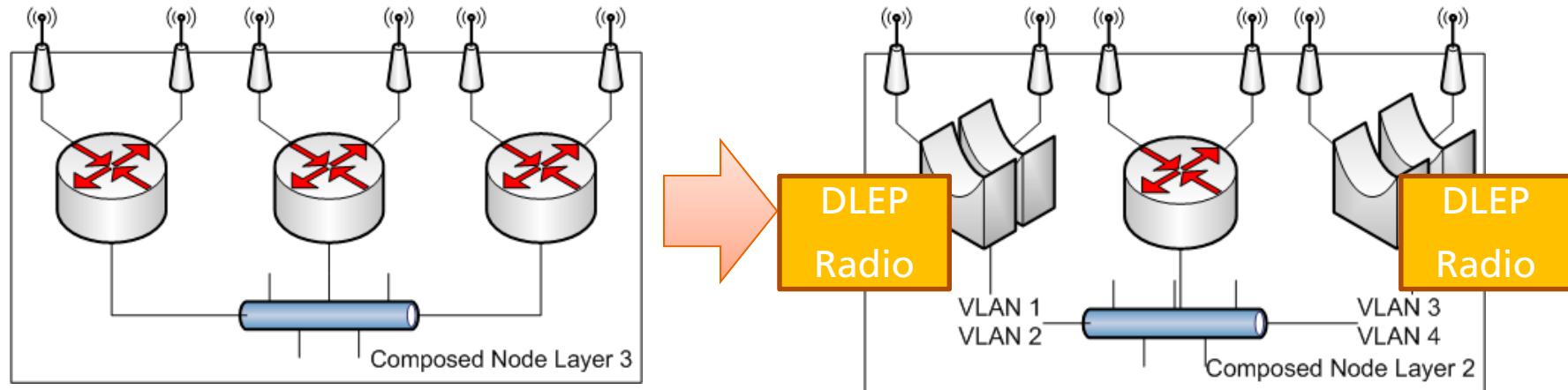
Community Network Node Design



Idea:

- Single routing instance
- Multiple radio devices

Community Network Node Design



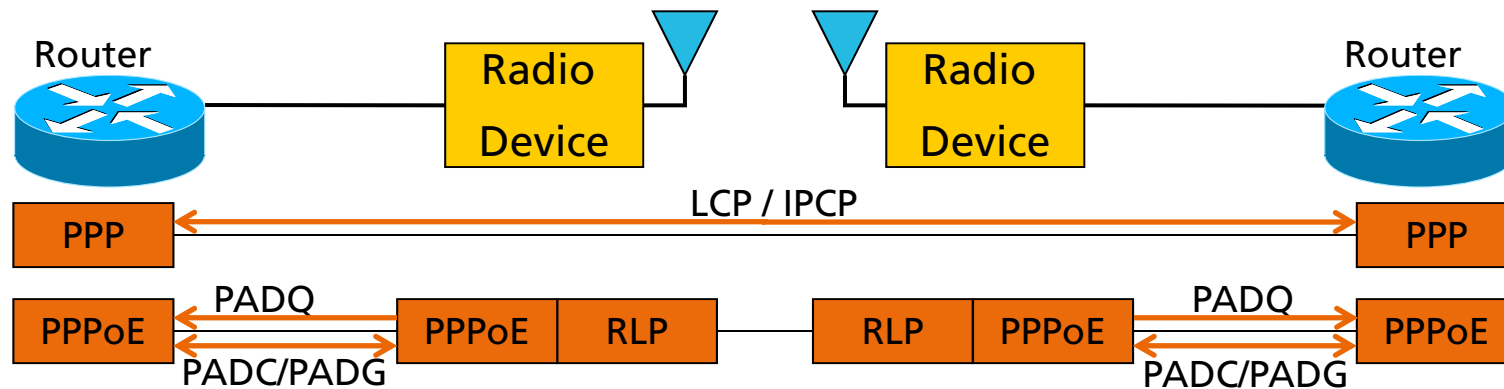
Idea:

- Single routing instance
- Multiple radio devices

Benefits:

- Cheaper node
- Efficient routing topology
- Layer-2 aware metrics

PPPoE Link Metric and Credit Flow Extension



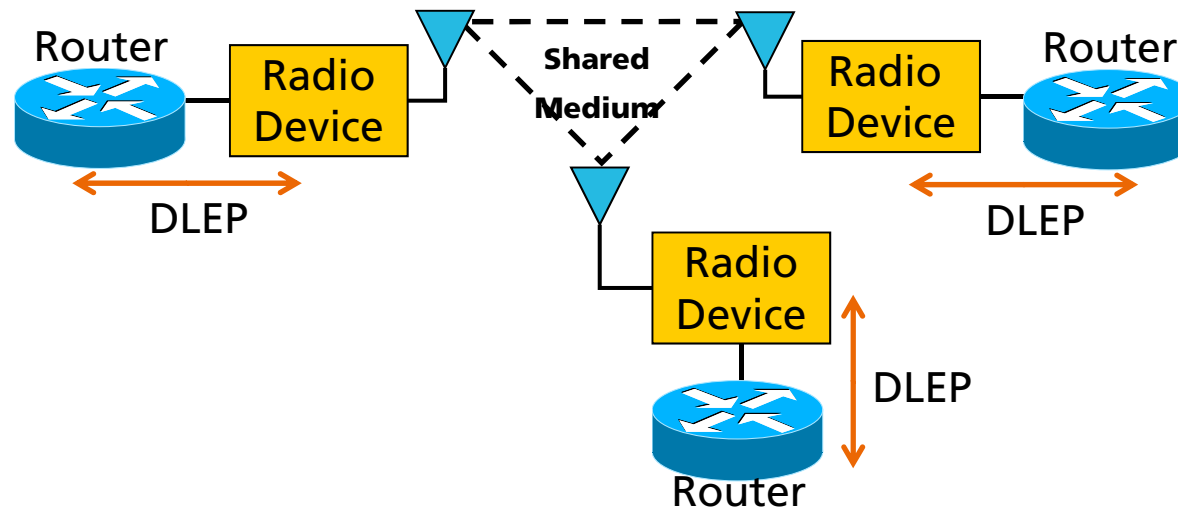
Approach:

- Piggyback data in PPPoE session

Drawbacks:

- Always "over the radio" overhead
- Limited metric support

MANET - Radio 2 Router Communication



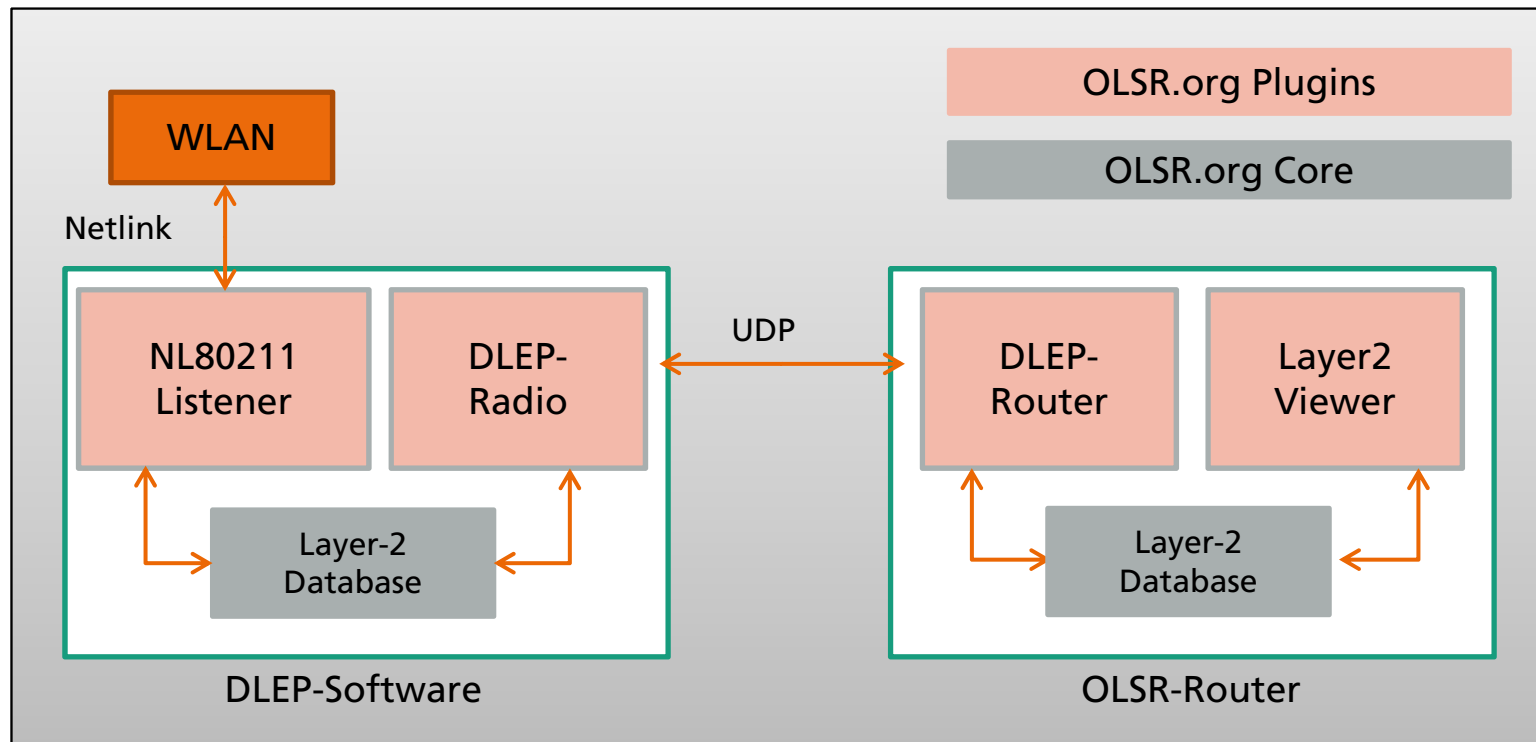
Approach:

- New R2R protocol
- No communication over the air

Current Discussions at IETF:

- Packet format
- Protocol mechanisms
- Standardized metrics

A Stable API for R2R Communication



Summary

- Single router nodes with multiple hardware devices
- R2R protocols for layer2 metric
- Lots of work to do in standardization

=> we need more people in IETF Manet
interested in DLEP !

Questions?

... thank you for listening.

OLSR.org network framework

