

OSPF extension for MANET with MPR

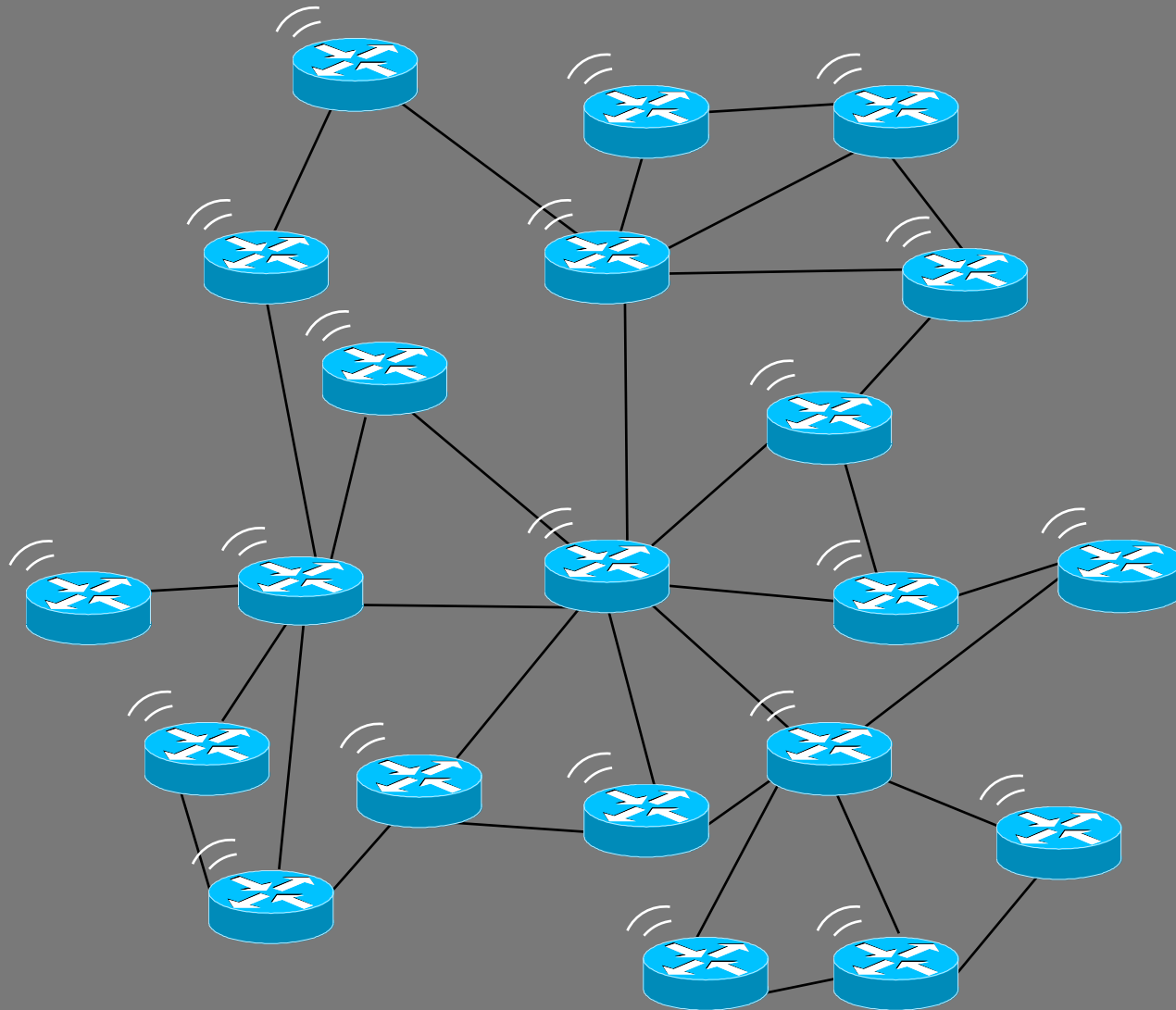
draft-baccelli-ospf-mpr-ext-03.txt

Emmanuel Baccelli

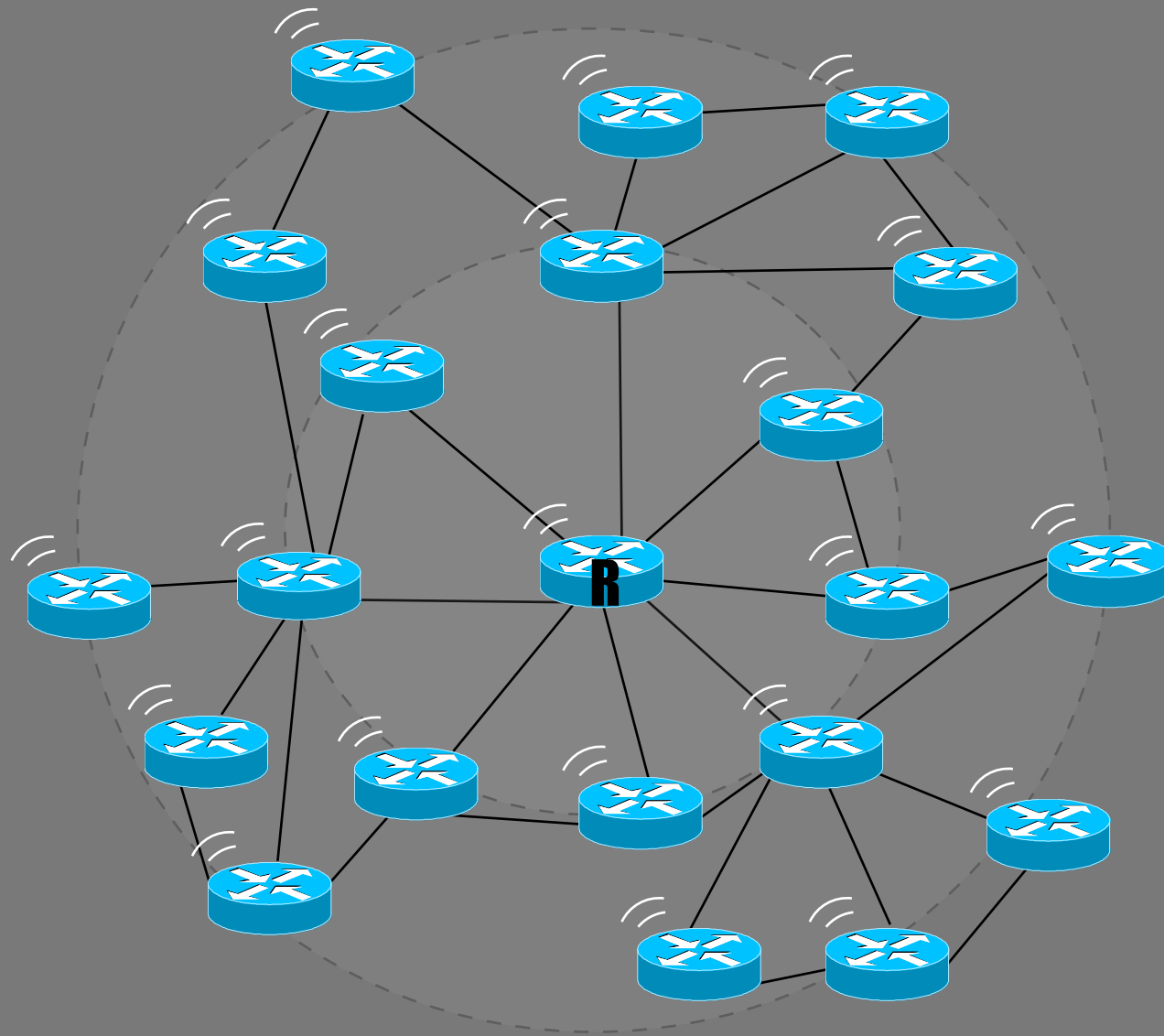
Agenda

1. Overview of the extension for MANETs
2. Current Activity
3. GTNetS Simulations Report
4. Next steps

Overview of the Extension



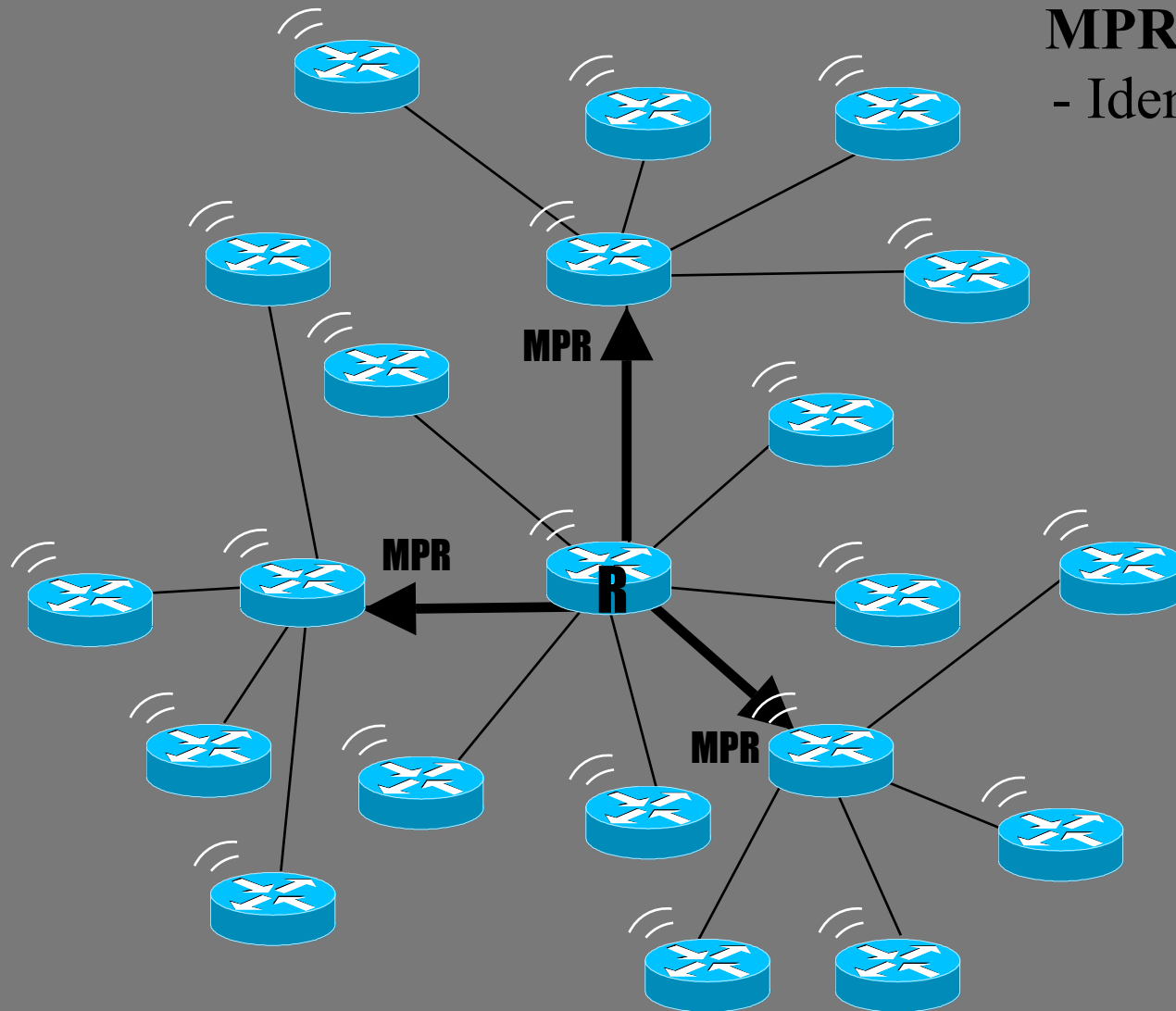
Overview of the Extension



Overview of the Extension

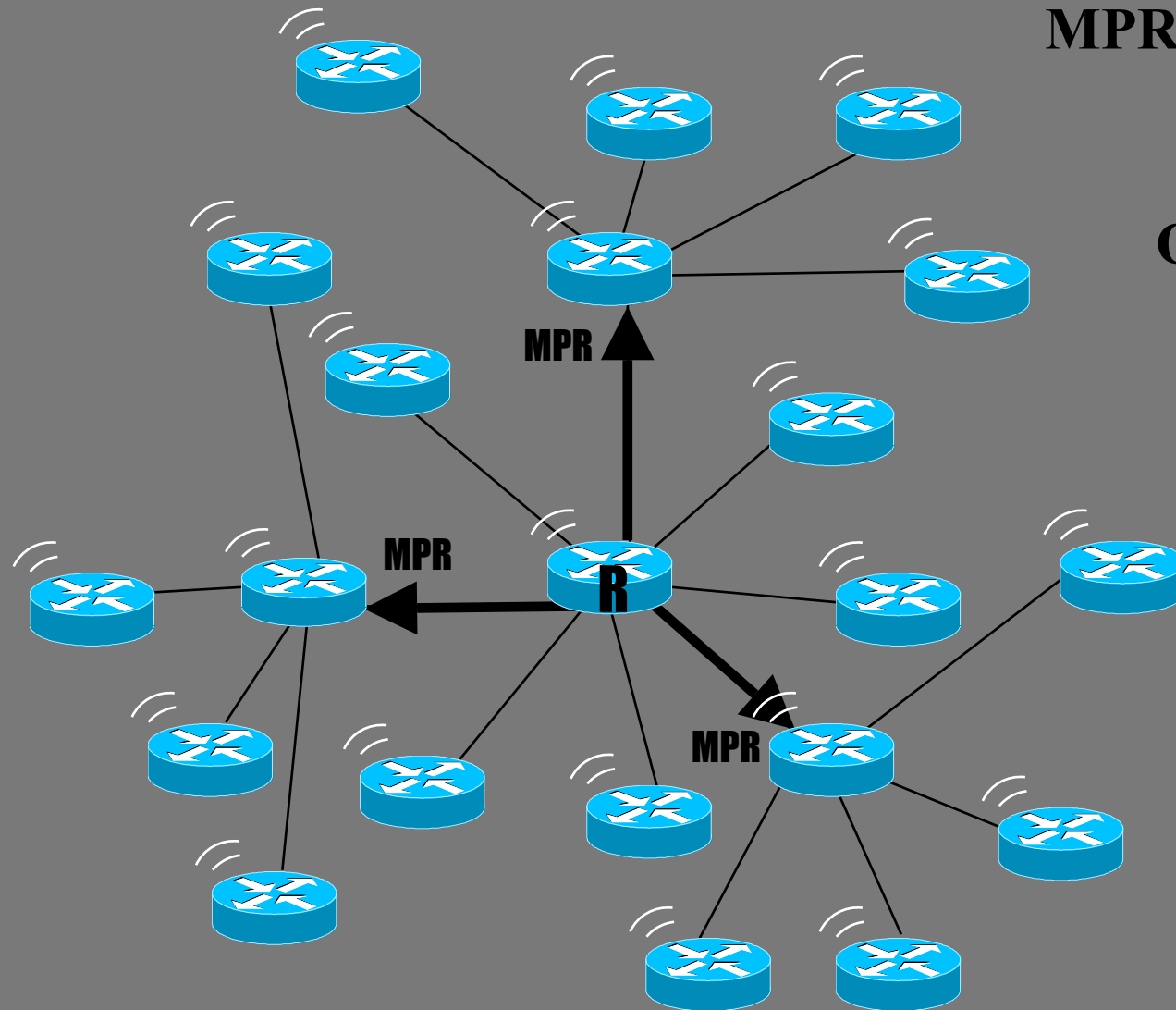
MPR Selection

- Identifying important links



Overview of the Extension

MPR Selection

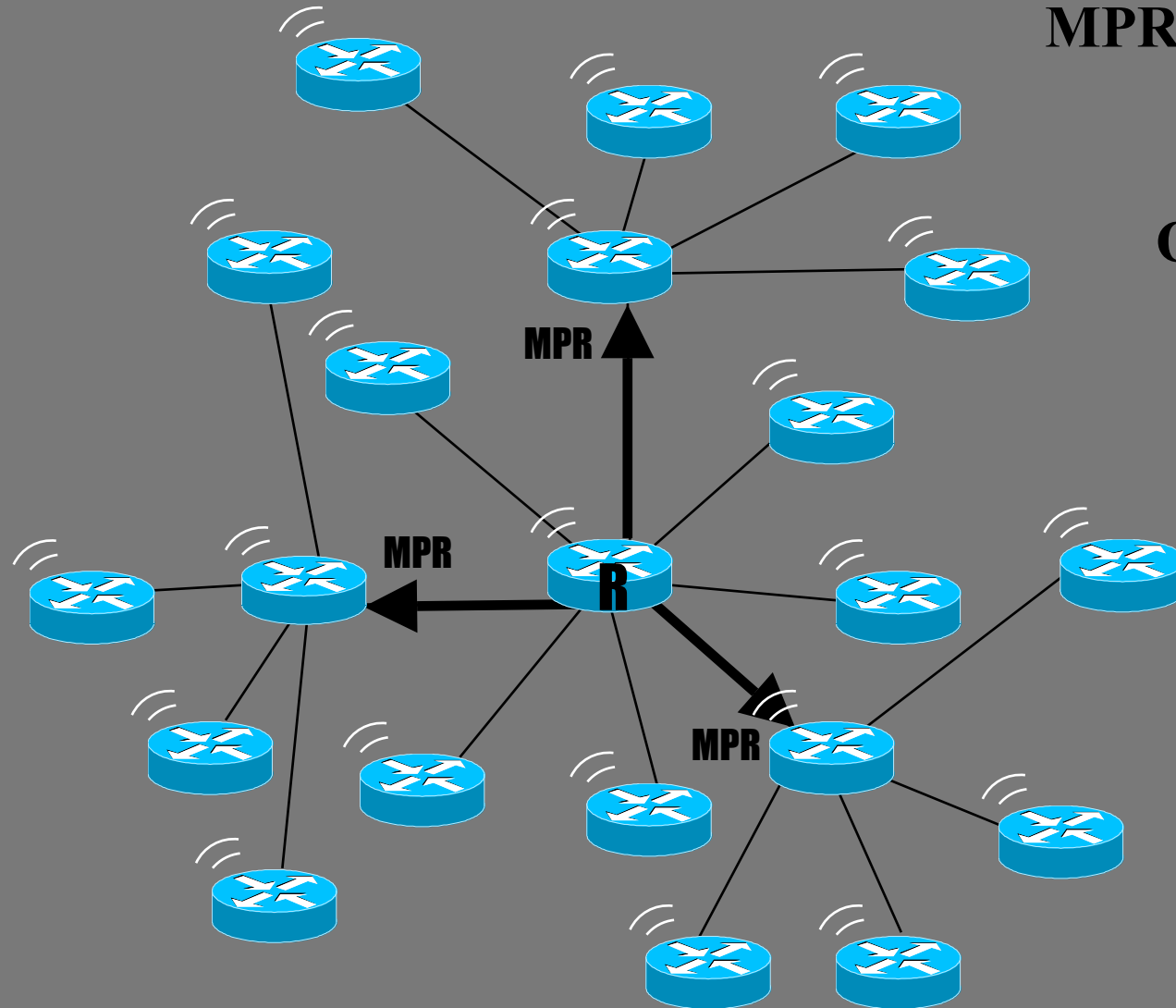


Overhead Reduction

- Flooding repeated only along important links (flooding reduction)

Overview of the Extension

MPR Selection

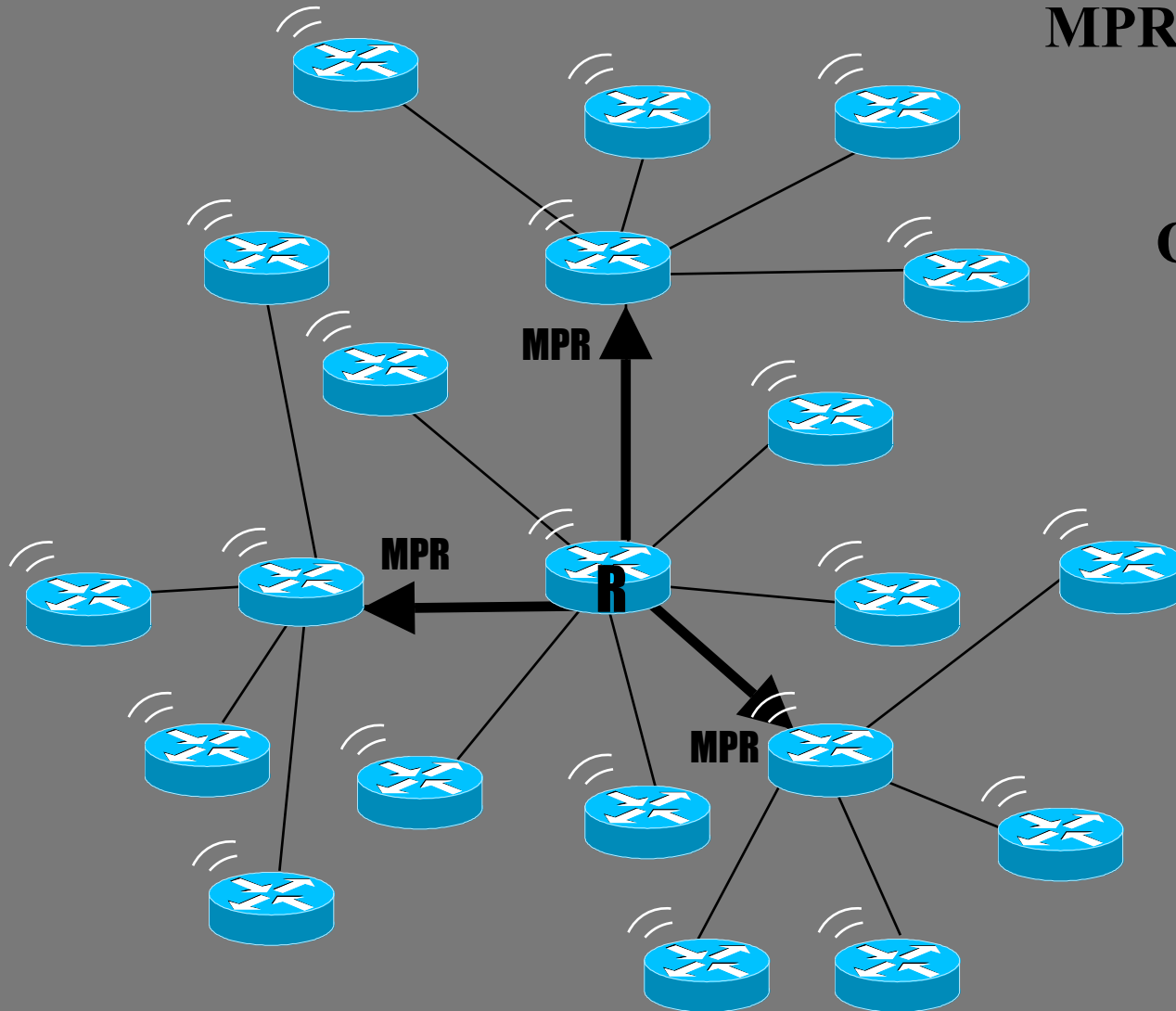


Overhead Reduction

- LSAs contain only important links (topology reduction)

Overview of the Extension

MPR Selection



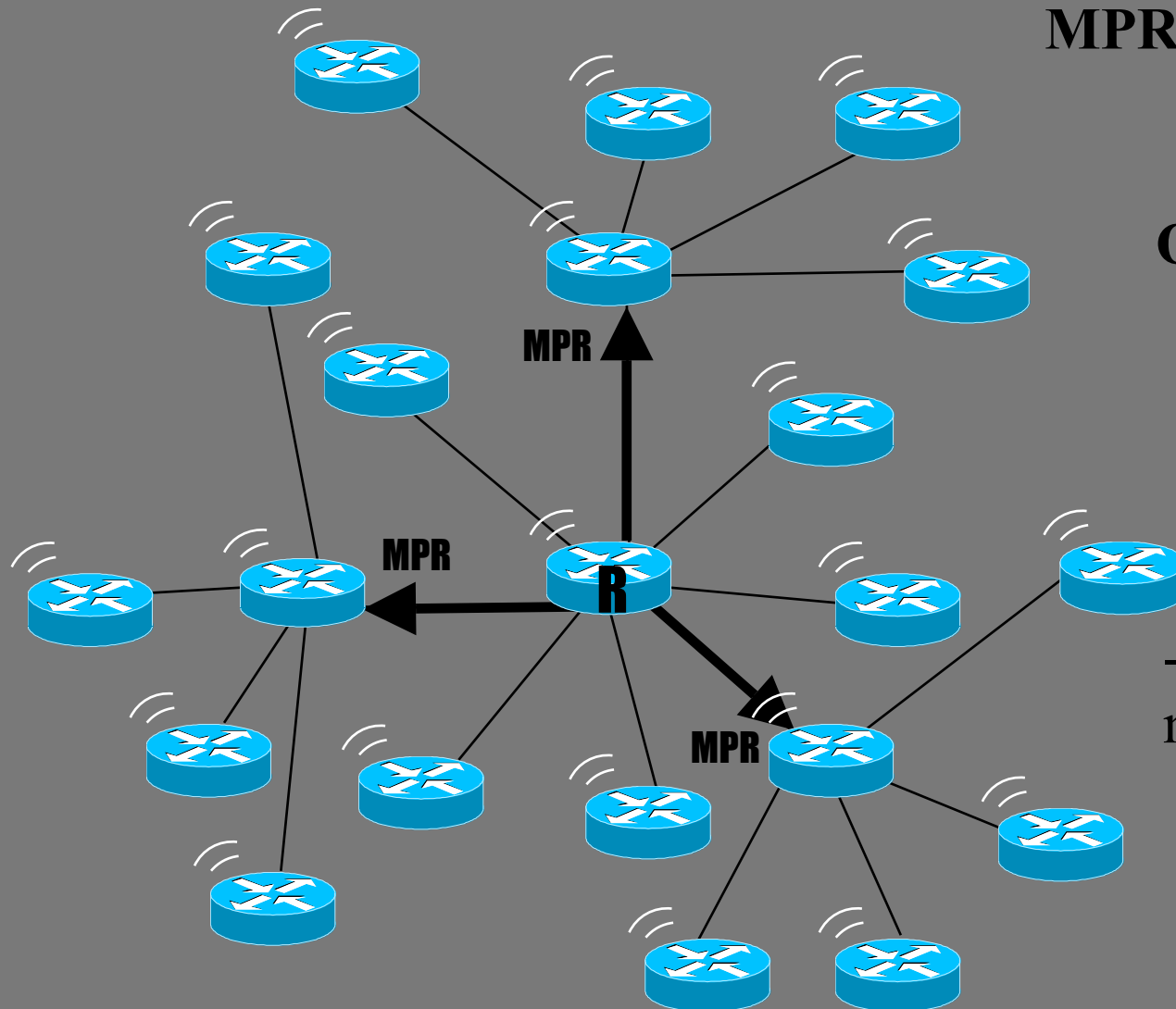
Overhead Reduction

- Adjacencies formed only over important links (adjacency reduction)

Overview of the Extension

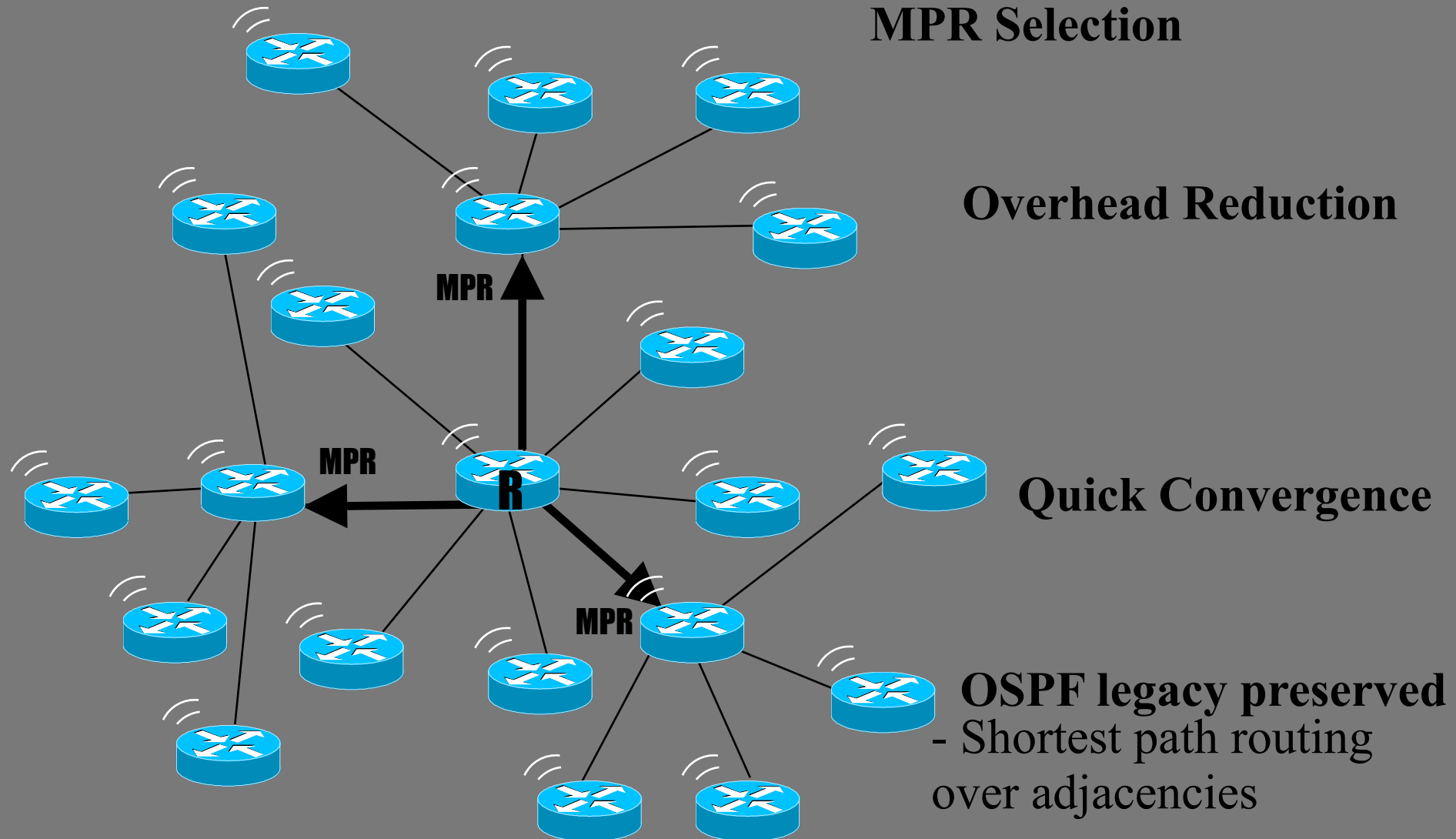
MPR Selection

Overhead Reduction

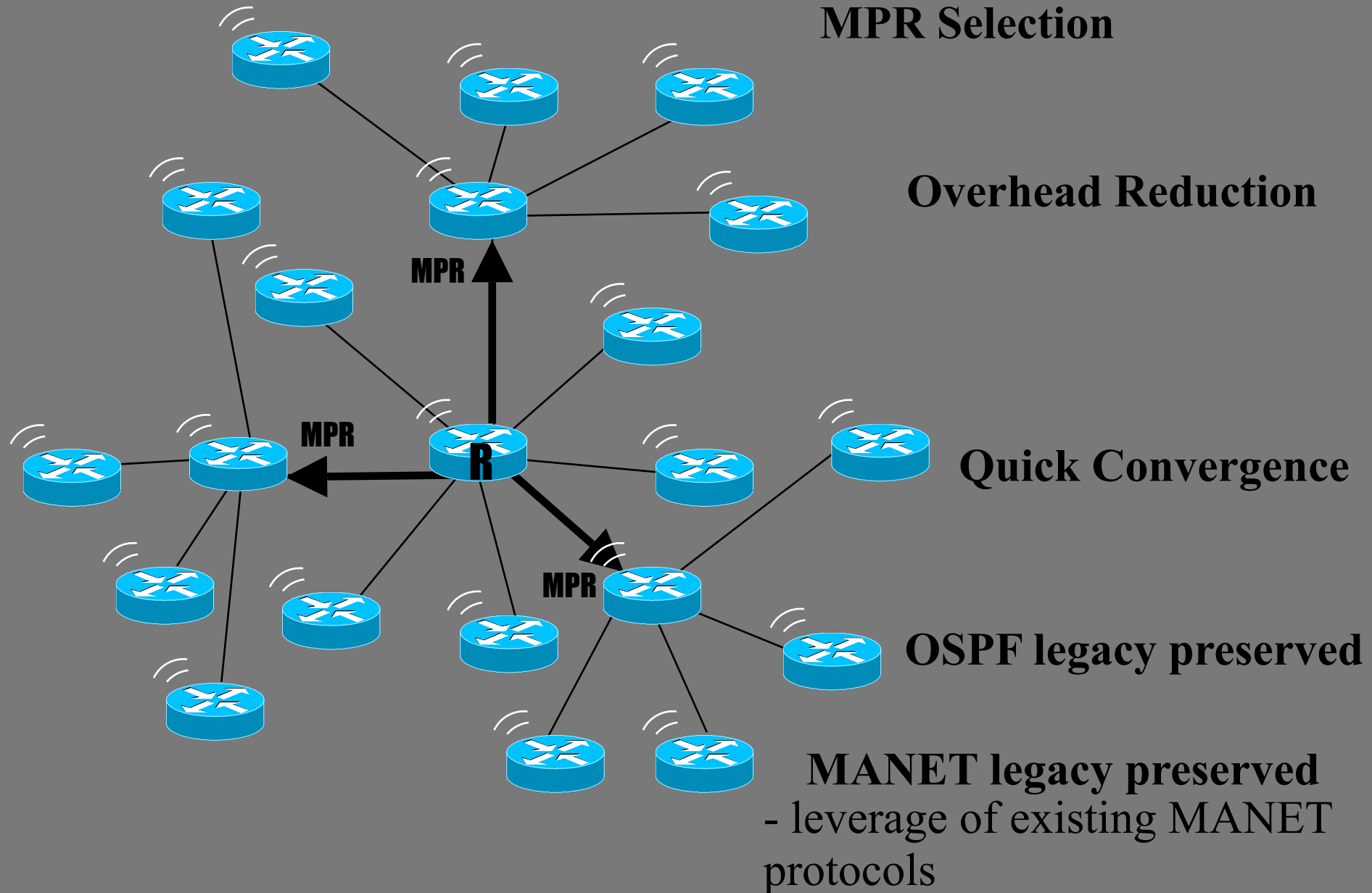


Quick Convergence
- Works for sparse/dense networks, low/high mobility

Overview of the Extension



Overview of the Extension



Current Activity

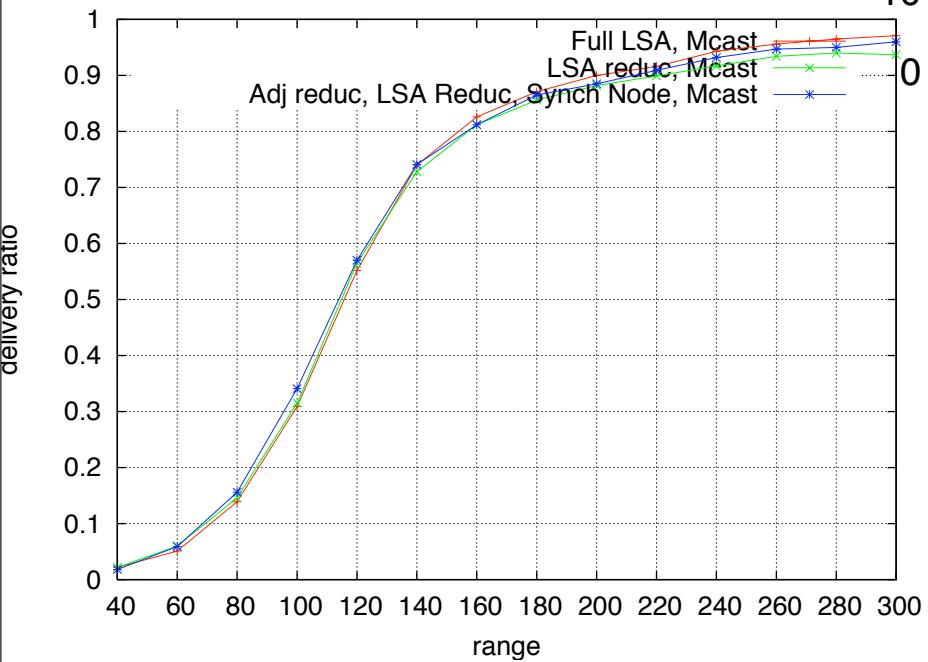
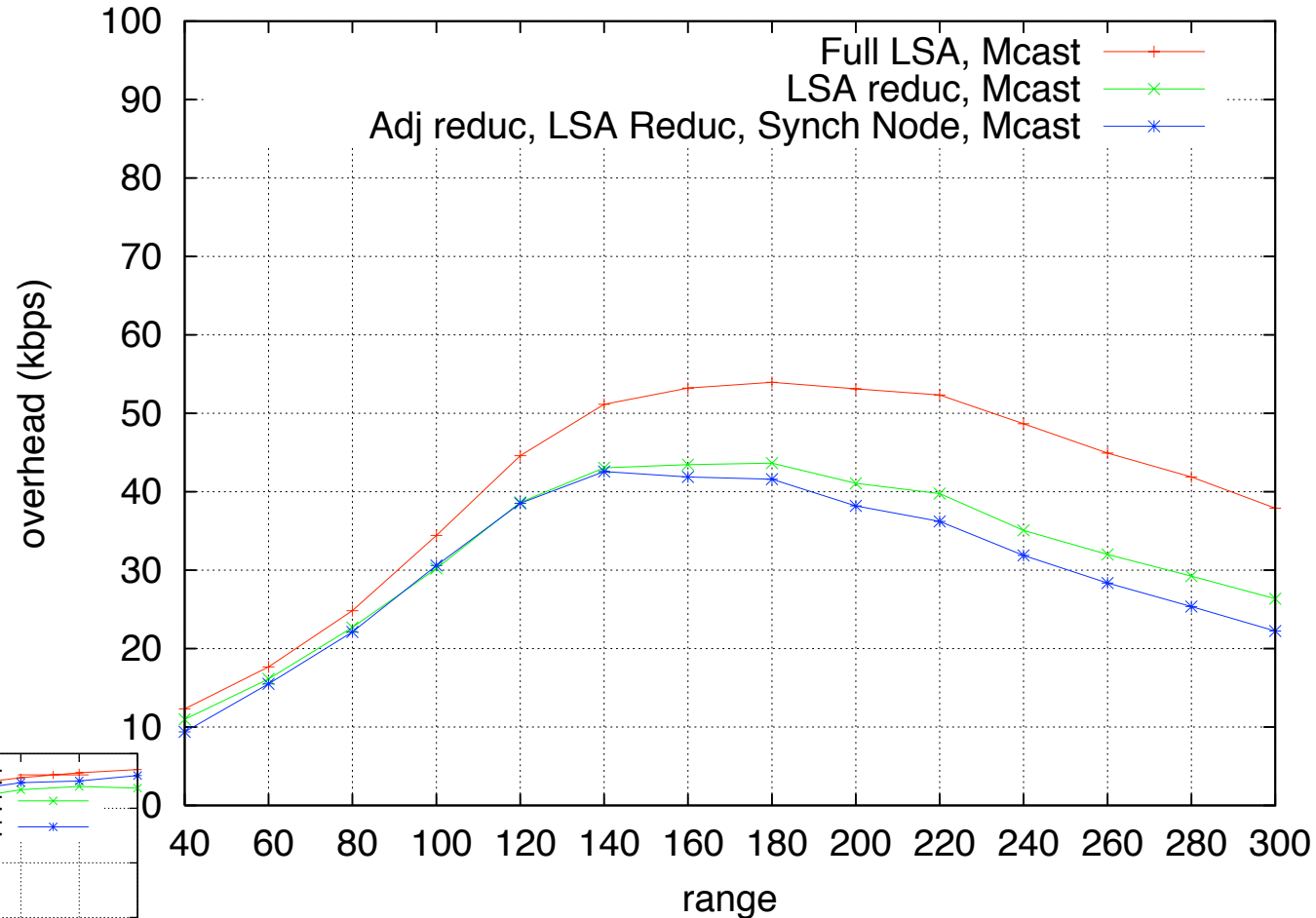
- Simulation results with GTNetS

<http://ndquan.free.fr/GTNetS/gtnets-SyncNode-AdjLSAeduc-Mcast.tar.bz2>

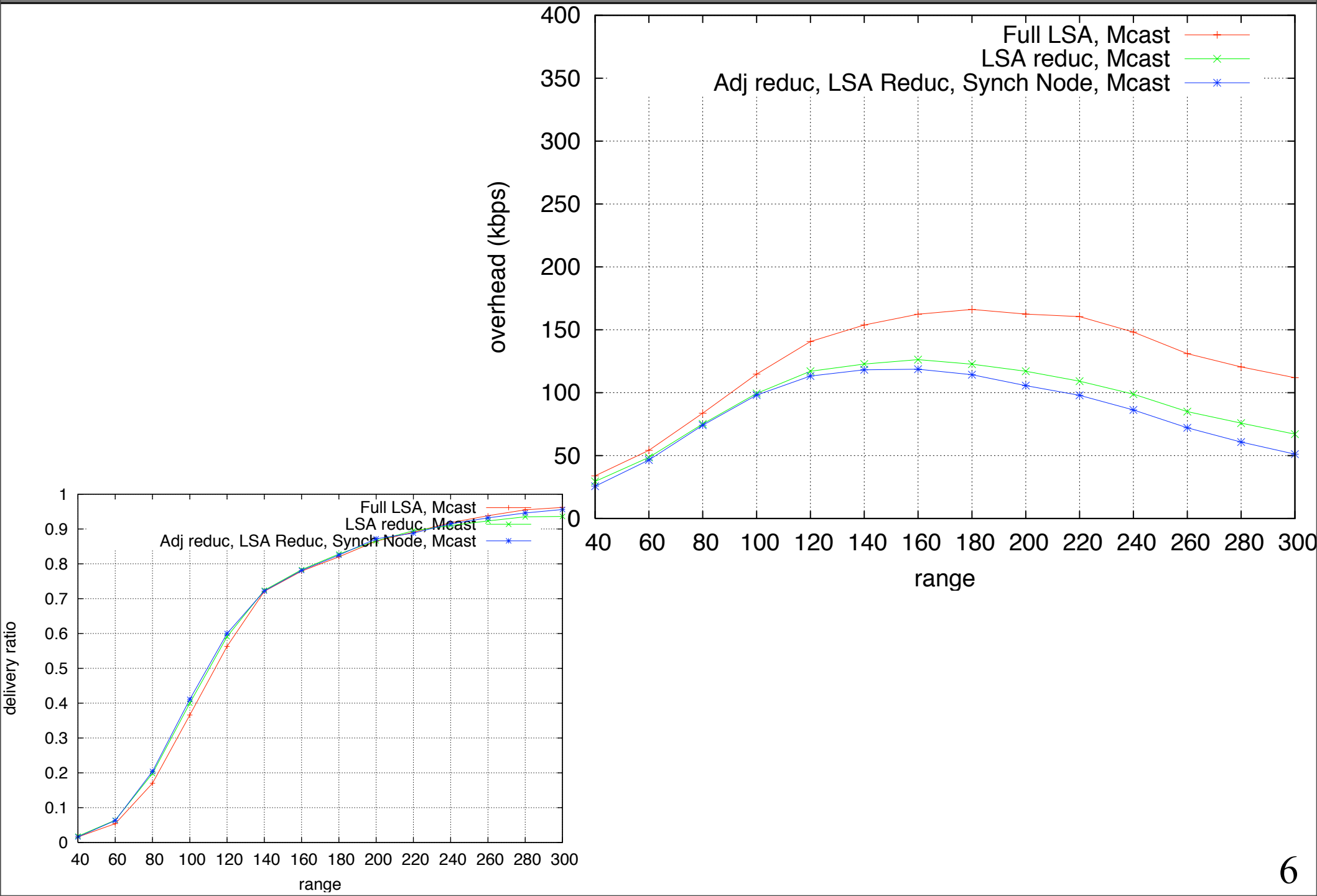
- Draft updated to -03

minor updates/clarifications since -02

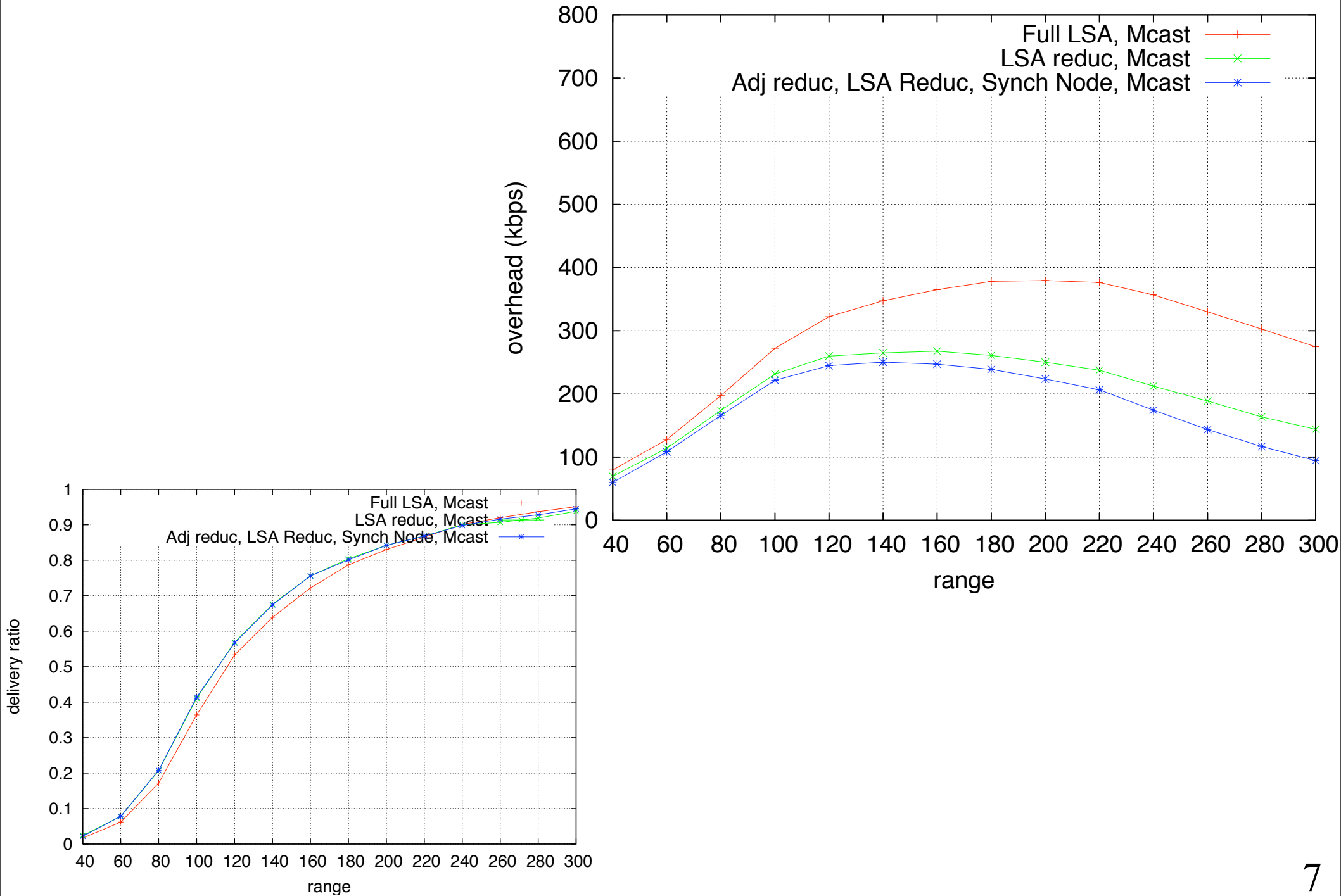
Simulation Results (20 nodes)



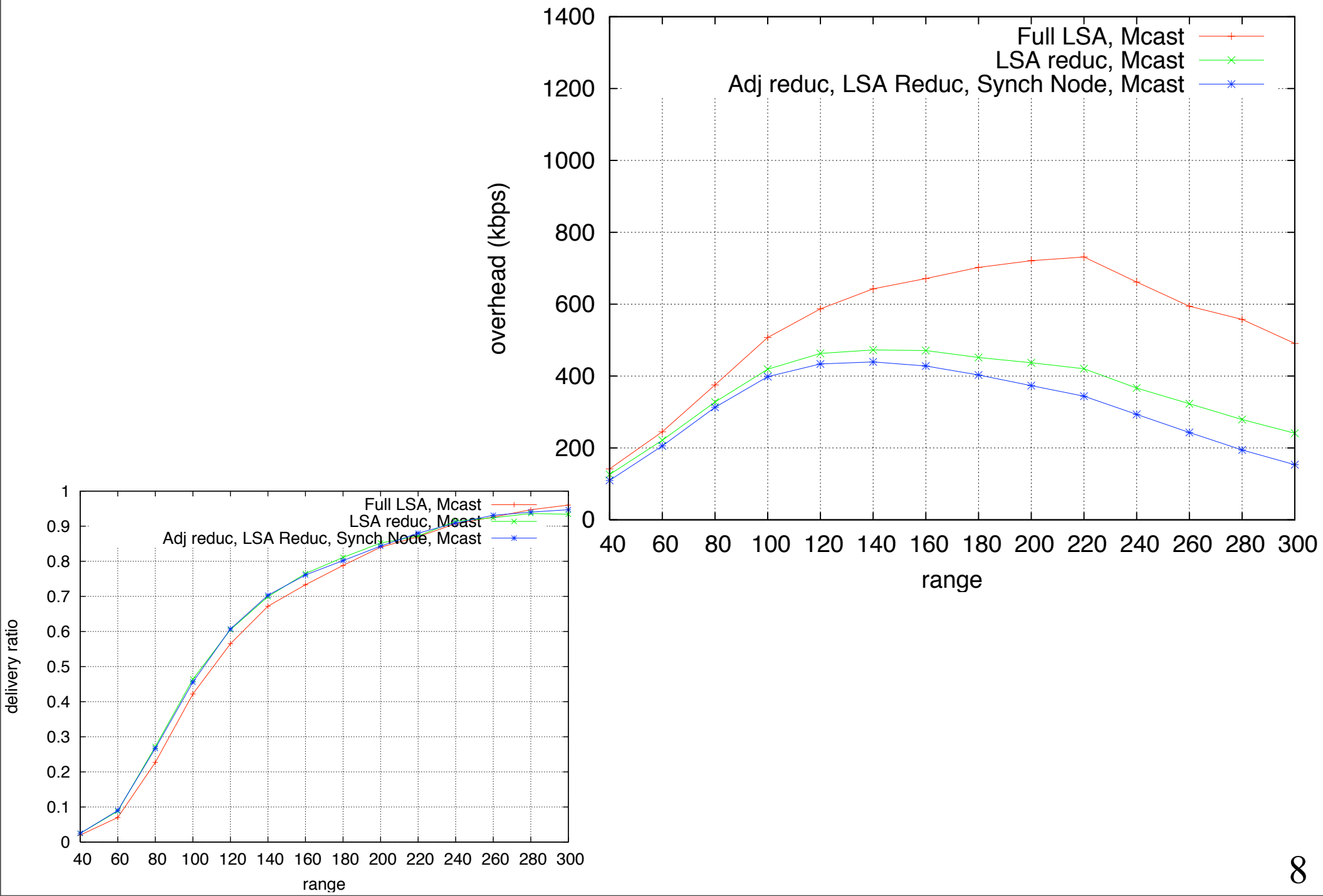
Simulation Results (30 nodes)



Simulation Results (40 nodes)



Simulation Results (50 nodes)



Simulation Results (60-100 Nodes)

vel=3m/s pause=20s, MinLSInterval=2 s

	lsu (kbps)	ls-ack (kbps)	dbsec (kbps)	delivery ratio	topology reduction factor	per node LSA interval
60 nodes	43.95	116.33	49.45	0.936	7.39	6.24
80 nodes	92.87	247.80	120.60	0.932	8.21	5.00
100 nodes	119.17	355.29	191.52	0.934	10.94	5.33

Next Steps

- Specification is stable
- Ready to give control of the document to the WG