OLSRv2 implementation update

Yasunori Owada
Niigata University, Japan

OLSRv2 implementation “nOLSRv2”

- Open source

  http://www.net.ie.niigata-u.ac.jp/~yowada/v2/

- For Routing daemon
  - OS : Linux
  - Hardware : i386, arm, sh-4, power PC, etc…

- For Network Simulator
  - Runs on QaulNet simulator

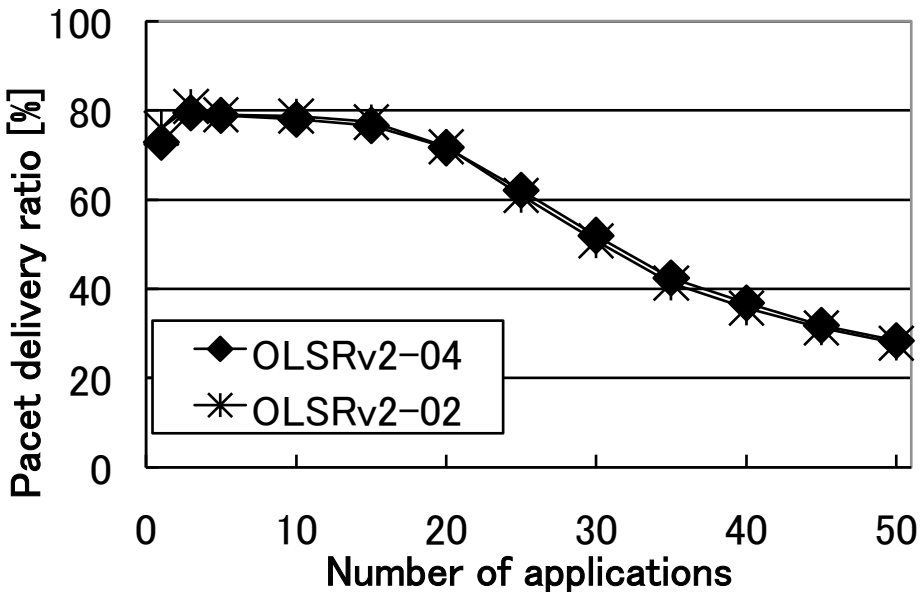
Updates from last release

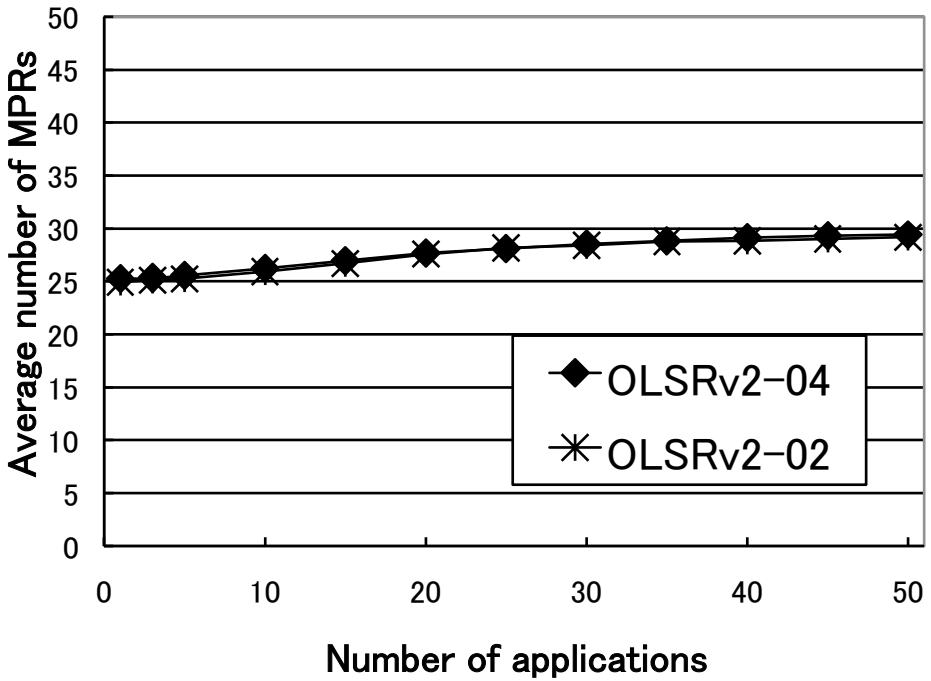
- Supported internet drafts
  - draft-ietf-manet-olsrv2-04
  - draft-ietf-manet-packetbb-09
  - draft-ietf-manet-nhdp-04
  - draft-ietf-manet-jitter-04
  - draft-ietf-manet-timetlv-04
  - draft-ietf-manet-iana-04
- IPv6 multiple addresses support
- Multiple IF / Attached NW support
- Dynamic IF information changes

Simulation parameters

Network Simulator	QualNet 4.0
Simulation time	1000[s]
Area	1000[m]×1500[m]
Number of nodes	50 nodes / single interface
Node placement	Random
Node mobility	Random Way Point Pause Time：0[s] Speed：0~5[m / s]
MAC protocol	IEEE 802.11b
Bit rate	Uni-cast / broadcast：2Mbps
Transmission range	2Mbps：339.322[m]
Propagation model	Two ray model
Application	CBR 512[Byte / Packet] 4[Packet / s]
Number of applications	1～50
Trials	10 times average
Comparison	OLSRv2-02，OLSRv2-04

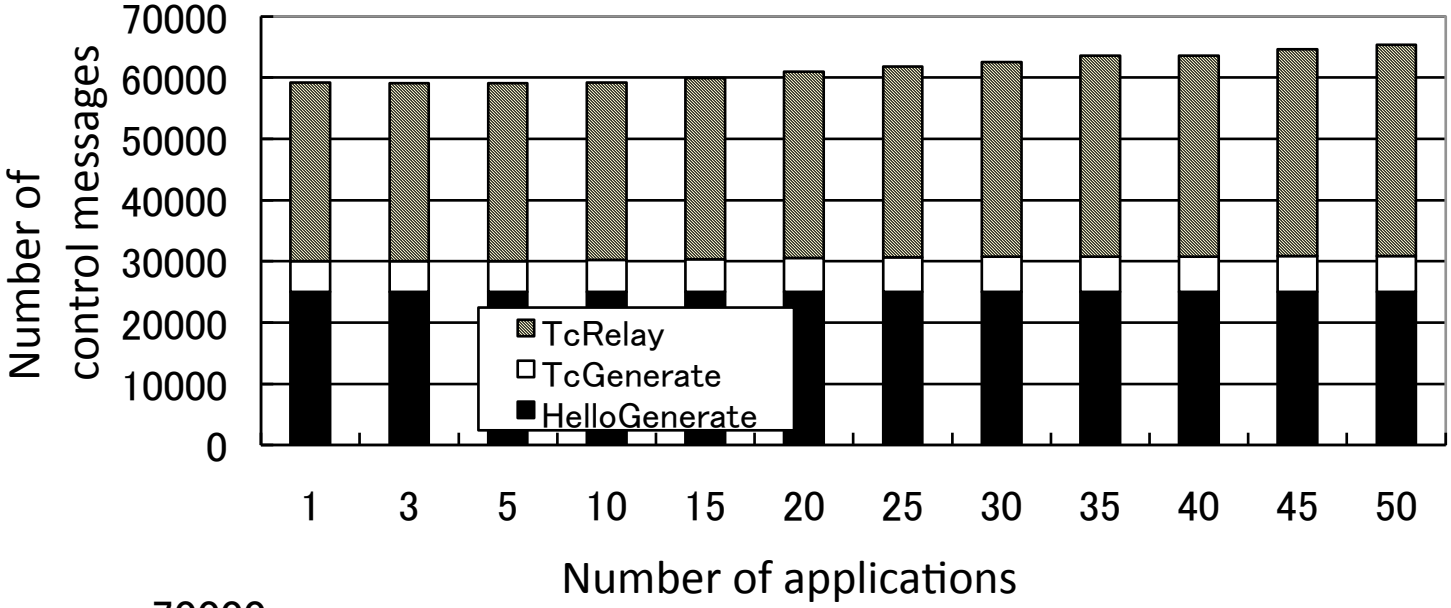
Packet delivery ratio & number of MPRs



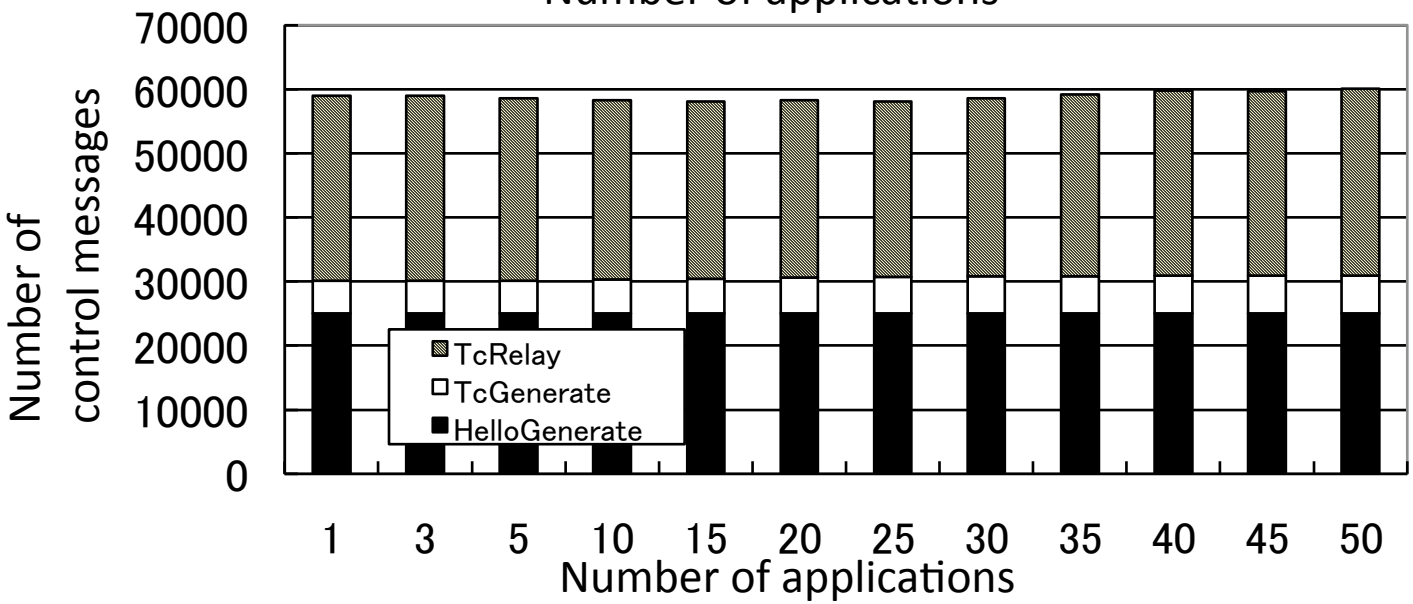


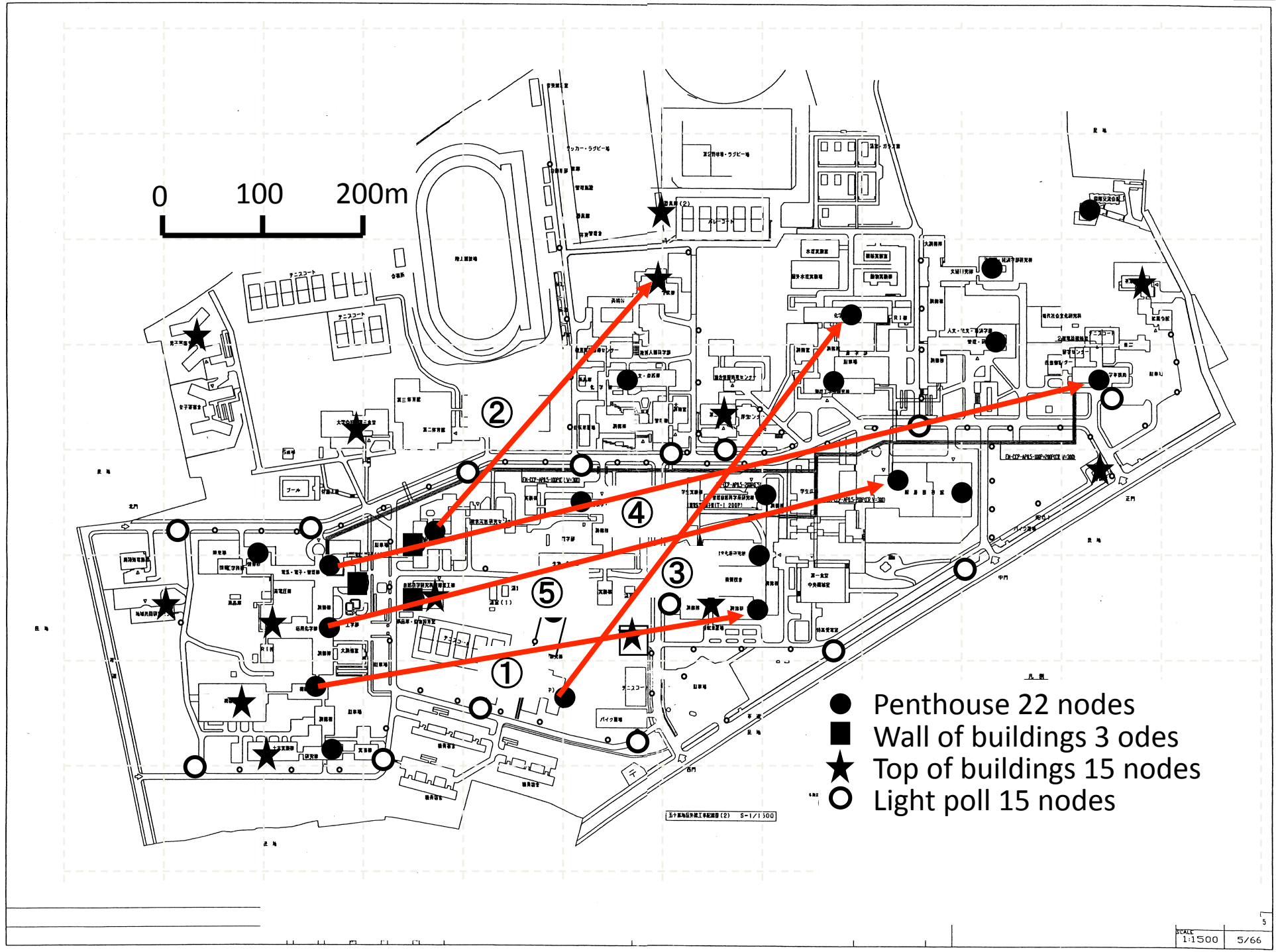
Control message overhead

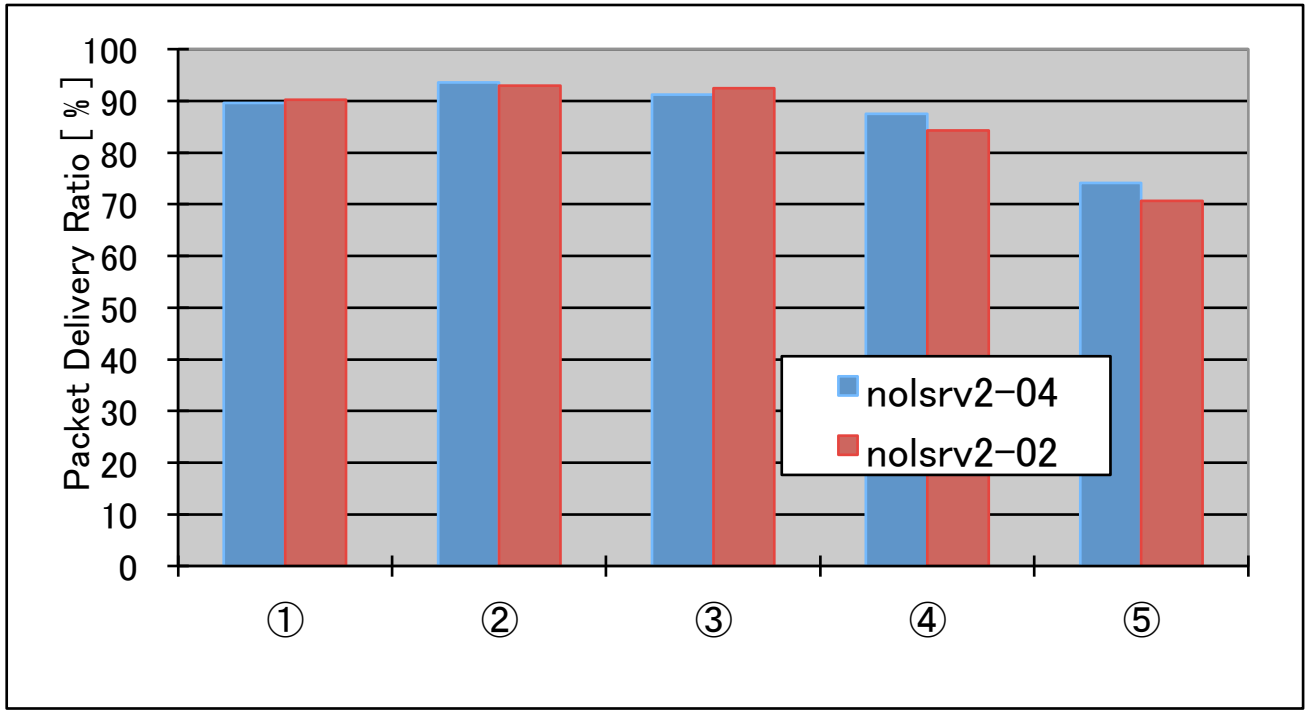
- OLSRv2-02



- OLSRv2-04



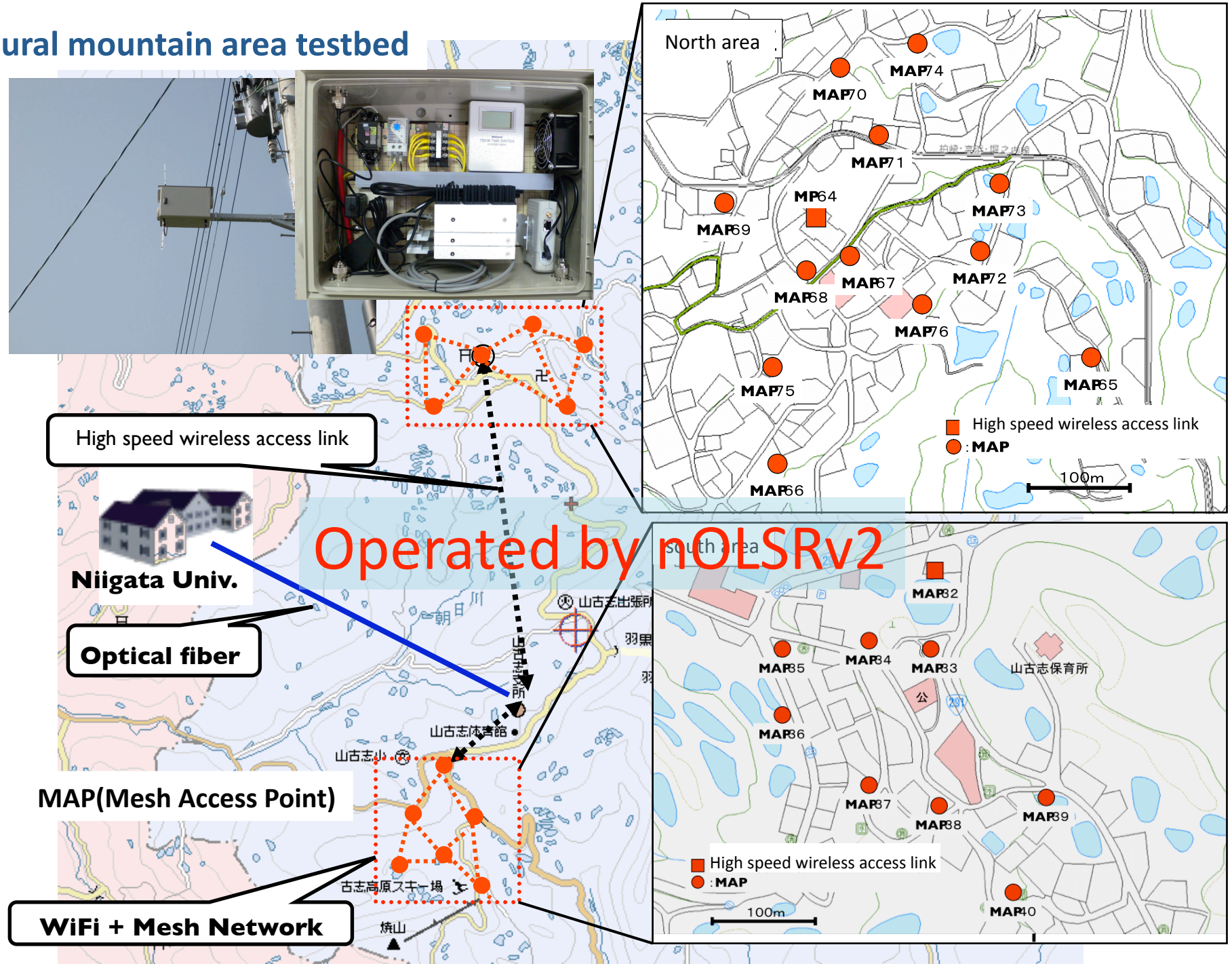

0
100
200m
①
②
③
④
⑤
Penthouse 22 nodes
Wall of buildings 3 odes
Top of buildings 15 nodes
Light poll 15 nodes
SCALE
1:1500
5/66



Packet Delivery Ratio [%]

Application flow No.	①	②	③	④	⑤	Average
nolsrv2-04	89.66	93.54	91.29	87.55	74.15	87.24
nolsrv2-02	90.26	92.97	92.49	84.27	70.64	86.13

Average Hop count

Application flow No.	①	②	③	④	⑤
nolsrv2-04	1.47	1.43	1.15	2.17	2.07
nolsrv2-02	1.82	1.87	1.38	2.69	3.72

Rural mountain area testbed