A Novel Anchor Selection Scheme for Distributed Mobility Management

Battulga Davaasambuu, Tumnee Telmuun, Dominik Sasko, Yu Keping, Shirmen Sodbileg

Introduction

5G Networks

- Ultra-low latency
- Ultra dense cells
- Heterogeneous architecture

Distributed Mobility Management

- Multiple anchor

Handover Management

- Cell list
- Intra-handover
- Inter-handover

Anchor Selection

- Distance-based
- Factor-based (load, latency ., etc)

Mobility Anchor Selection

- Multi Factor-based Anchor Selection
- Parameter Optimization
- Advantenges
  - Reduced Handover Delay
  - QoS for subscribers

Cost function

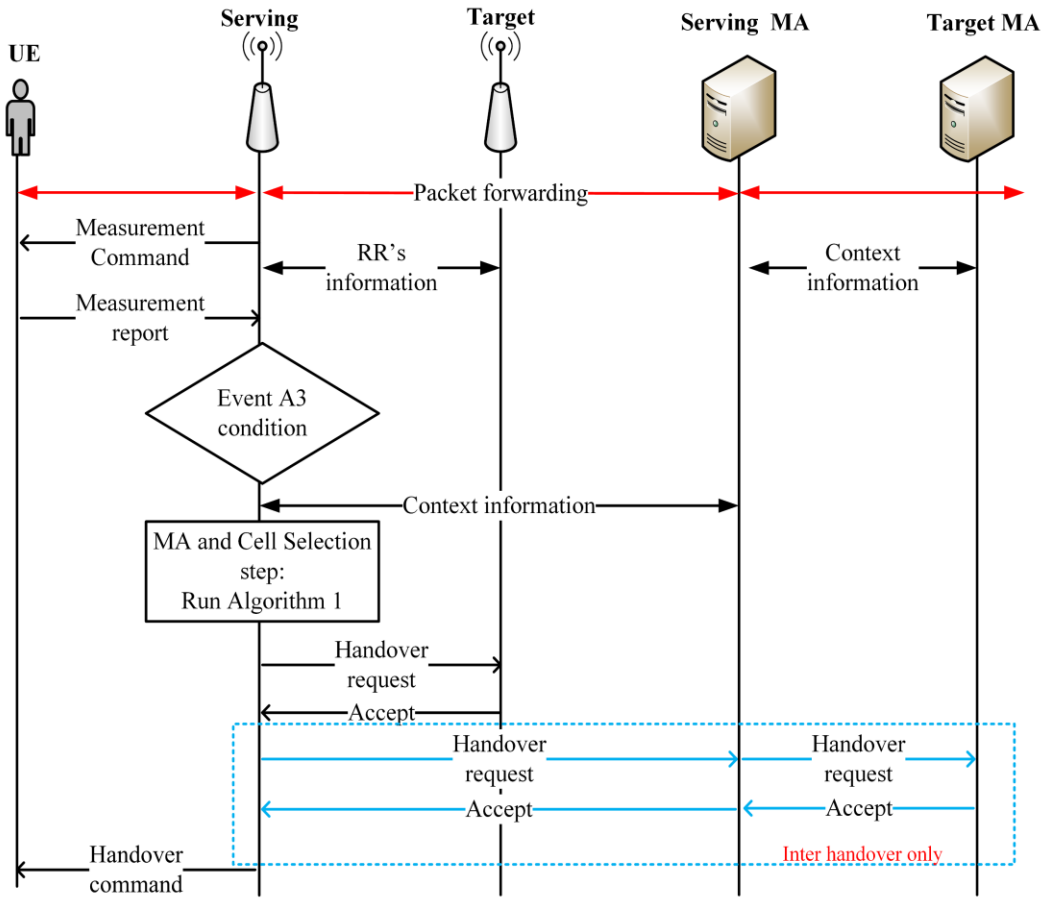
- Load of Target Anchors
- Available Radio Resources of Target Cell
- Handover performance

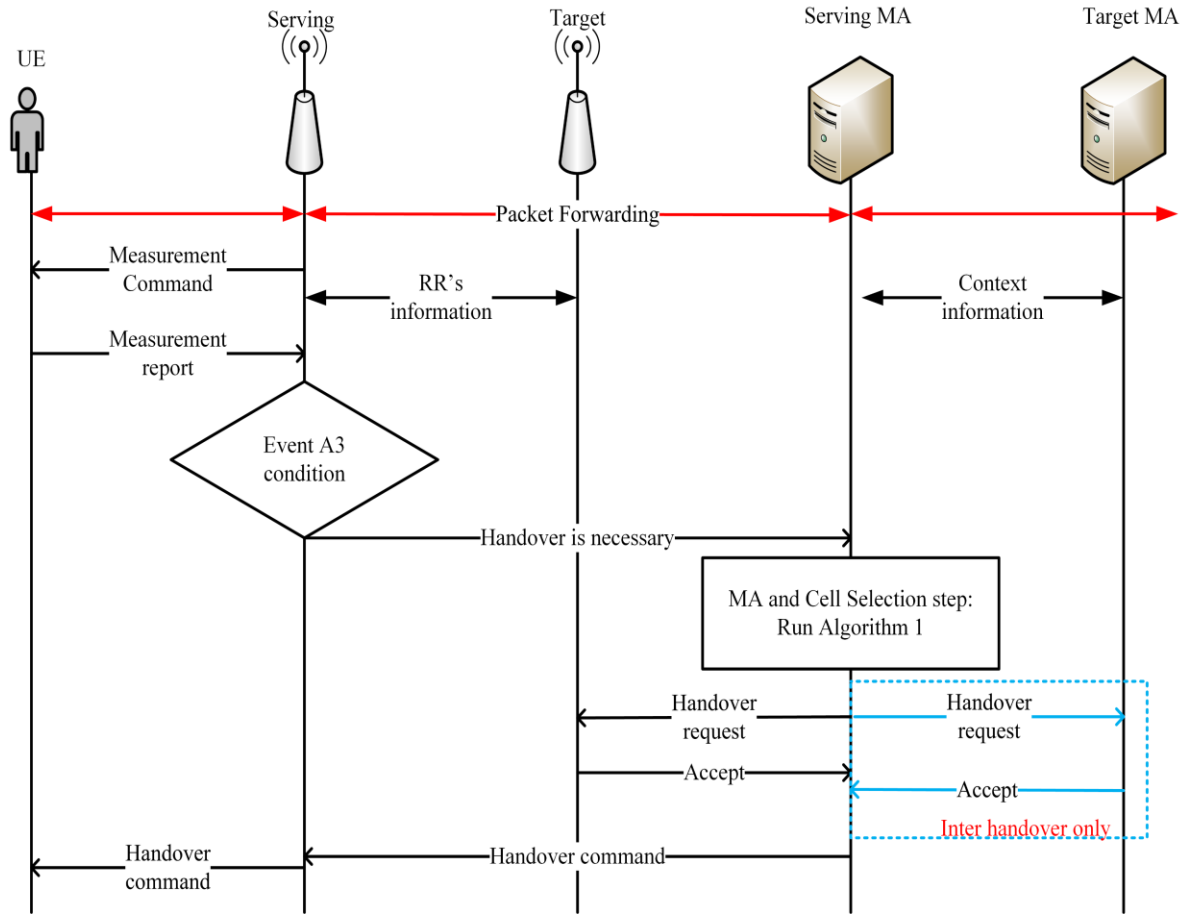
Selection functions level

CELL SELECTION

ANCHOR SELECTION

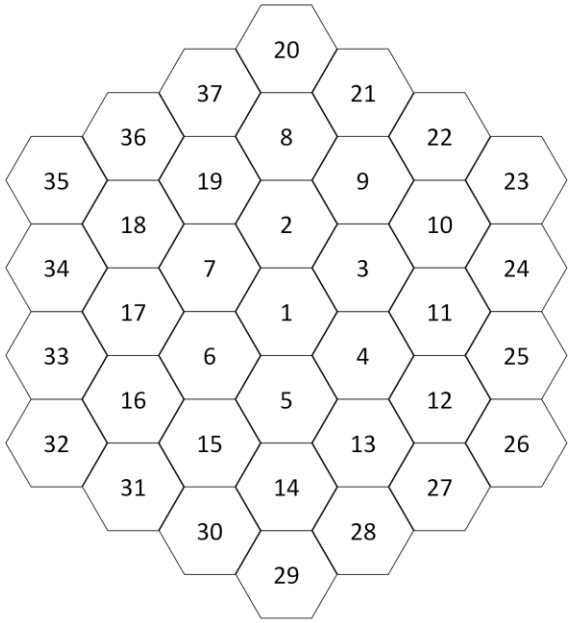
Flowchart of cell and anchor selection



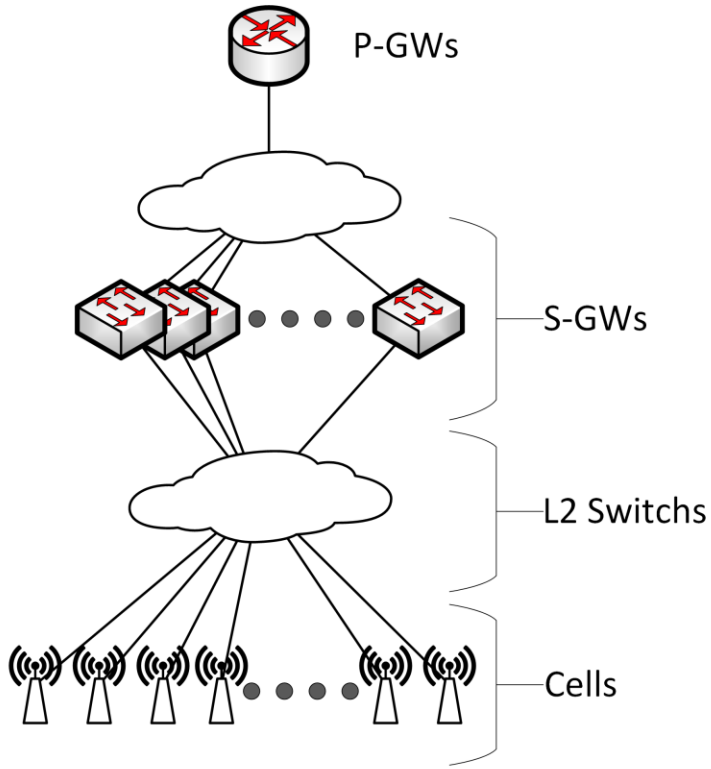


Network simulation model

- 37 cells with 500m radius
- 12 Layer-2 switches
- 8 anchors
- Subscribers up to 1000

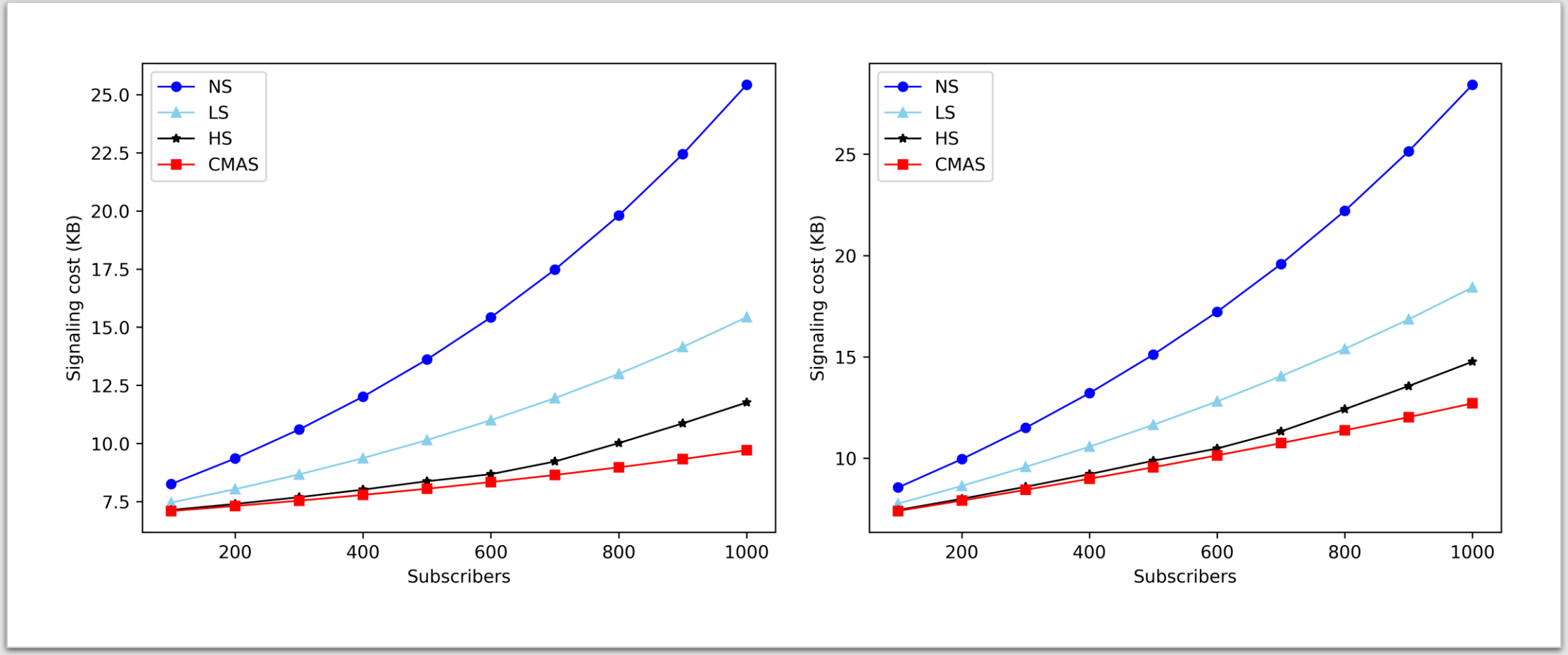


a)

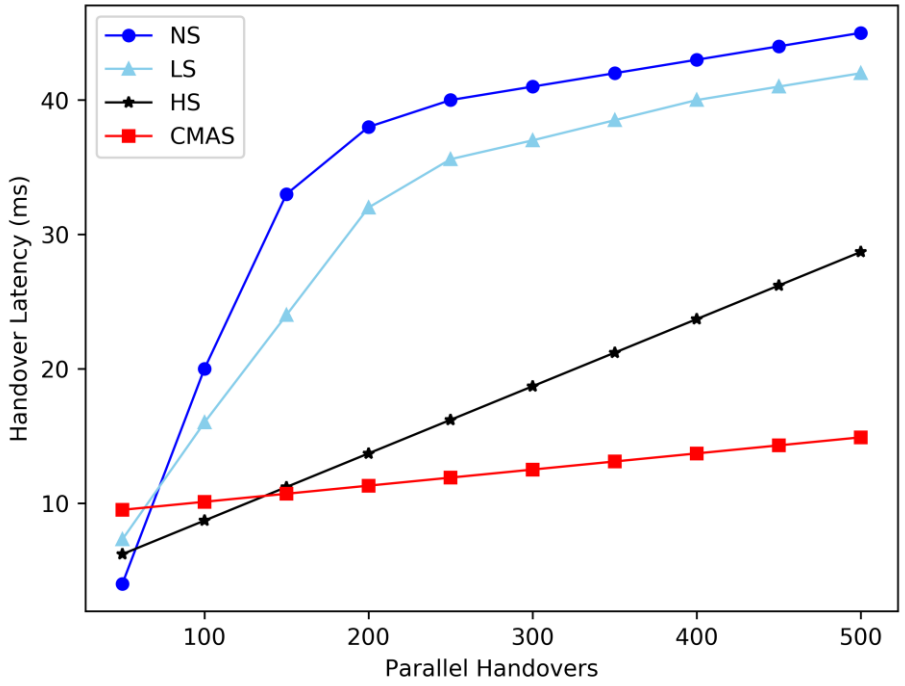


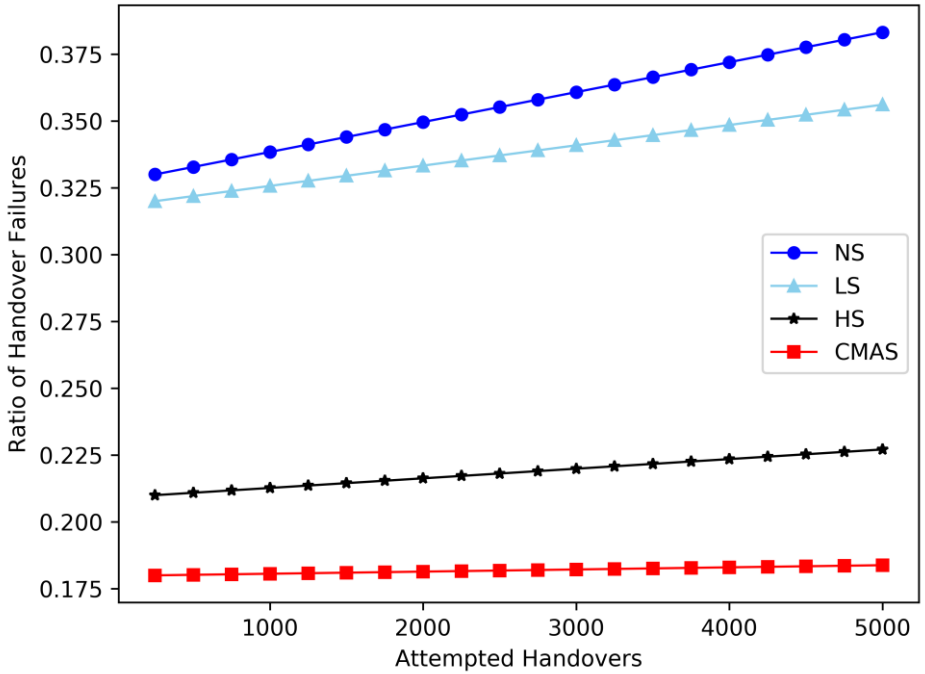
b)

Cell and Anchor

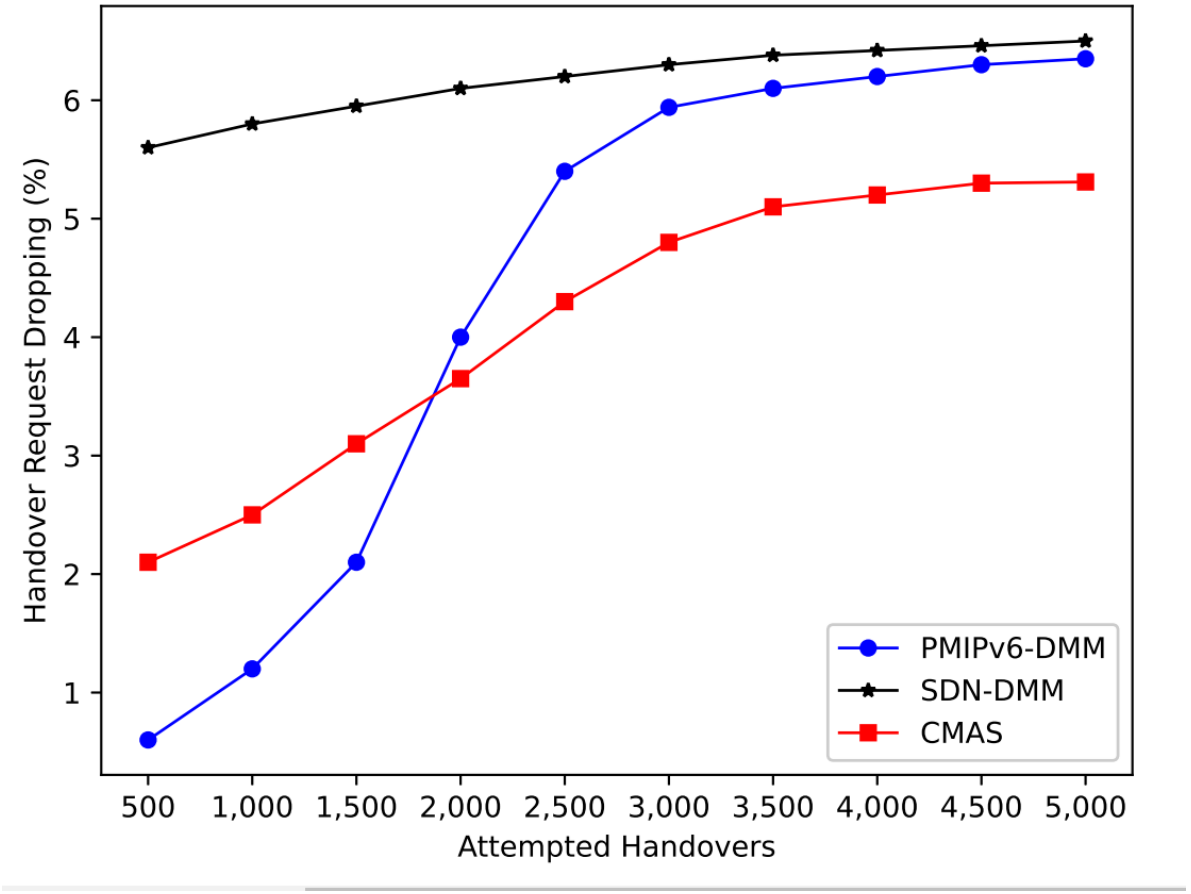


Handover latency and failures ratio





Analysis of DMM solutions



Баярлалаа