

# Real Time Video Caching over Low Latency MEC in OAI LTE Network

Supriya Tambe, Jyoti Tiwari, Yogesh Mandge, Antony Franklin A, and Bheemarjuna Reddy Tamma  
Department of Computer Science and Engineering, Indian Institute of Technology Hyderabad, India

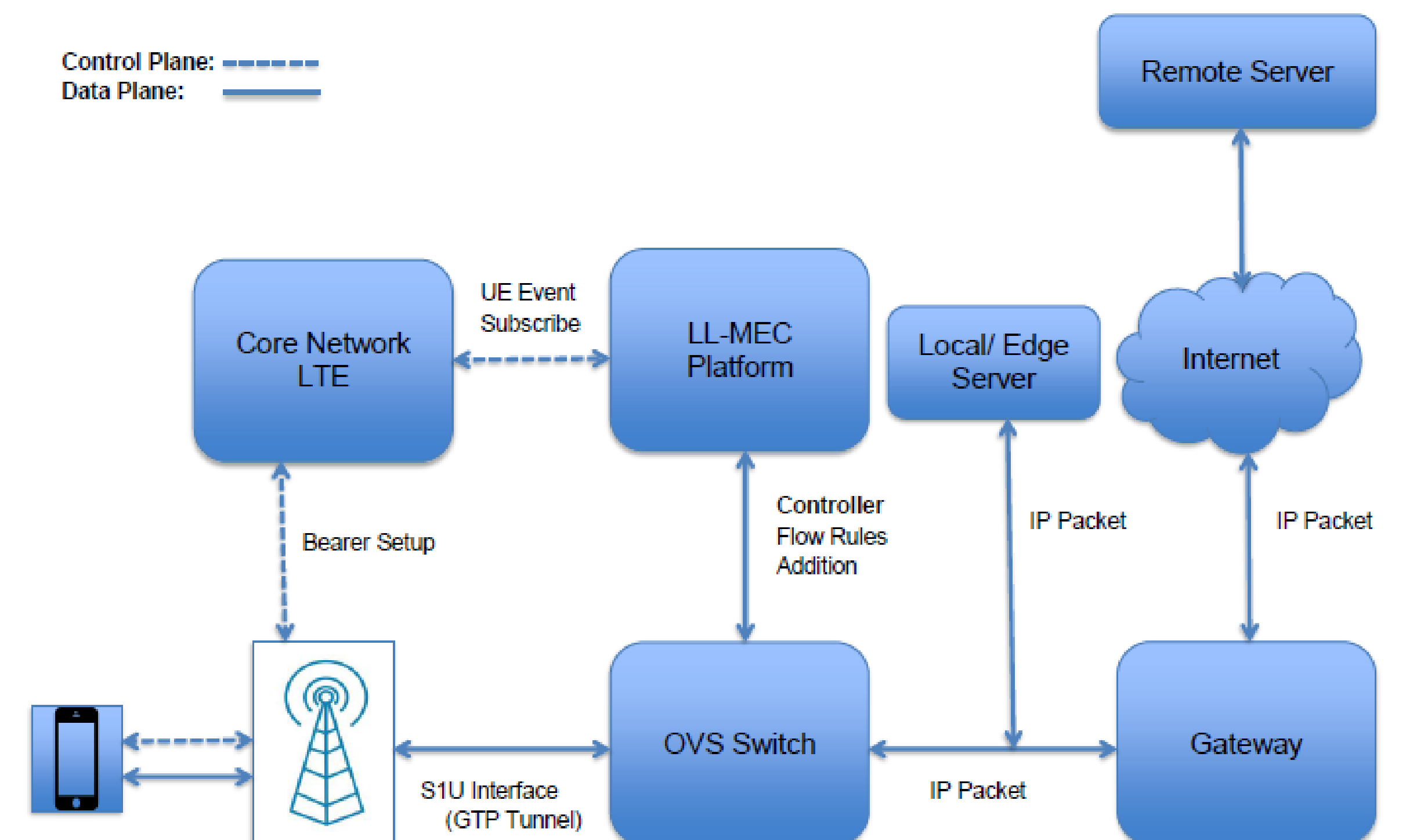
## INTRODUCTION

- Multi-access Edge Computing (MEC) is an evolution of cloud computing that brings the applications closer to the end devices.
- In the 5G network, MEC is one of the building blocks for meeting the Key Performance Indicators (KPIs) of the 5G network especially for the applications characterized by ultra-low latency, high bandwidth and real-time access to radio network information.
- In this demo, we intend to showcase a use case of MEC (Real time video caching) fully integrated with LTE network using open source based OpenAirInterface (OAI) LTE and Low Latency MEC (LL-MEC) platforms.

## MOTIVATION

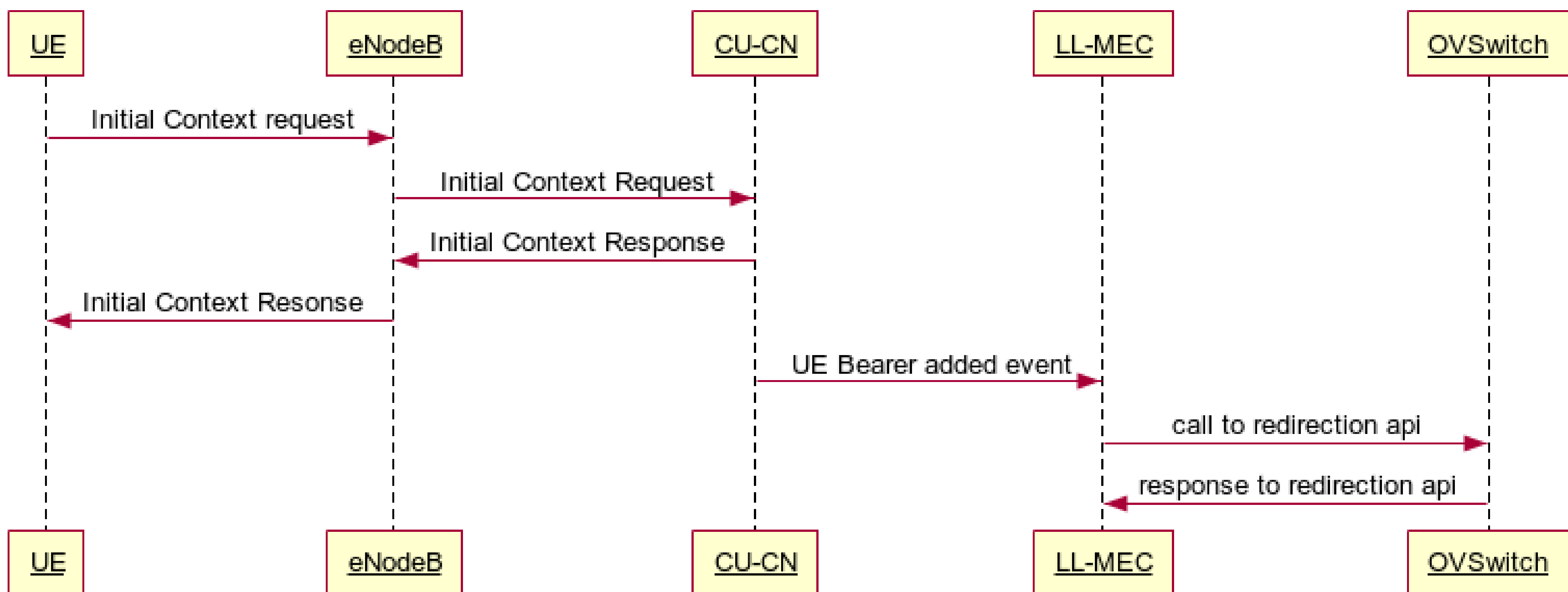
- Bringing the application closer to the user will reduce the backhaul network congestion and improve the application performance in terms of Quality of Experience (QoE).
- To provide an optimized and low latency computing infrastructure with deployment agility that can scale horizontally or vertically based on requirements.

## MEC SETUP ARCHITECTURE

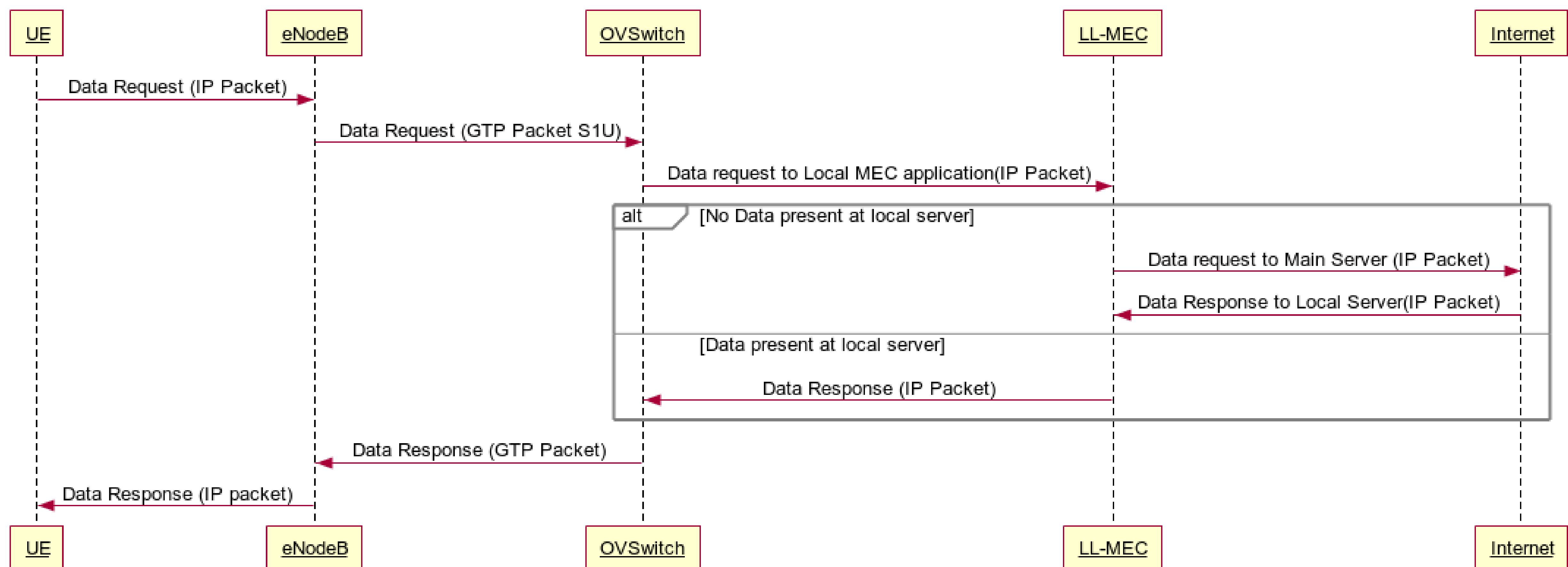


## SEQUENCE DIAGRAMS FOR CONTROL & DATA PLANE

### Control Plane: Bearer setup and Redirection to Local Cache server



### Data Plane: Redirection to Local Cache Server



## FUTURE WORK

- Future work comprises of the Development of MEC platform in compliance with 5G Core Network based Service Based Architecture (SBA).

## ACKNOWLEDGEMENTS

This work was supported by the research project **5G Indigenous Test-Bed** funded by the Department of Telecommunication (DoT), Government of India (GOI).