CELTIC-NEXT
Project Proposal Pitch

13th of March, Online

Fraunhofer IIS

NomadSlice:

Nomadic Network Slicing for private industrial 5G-and-Beyond Networks

Anna Richter, anna.richter@eas.iis.fraunhofer.de

Demand-driven resource partitioning through dynamic network slicing

Main benefit of the idea:

- Optimized network management for heterogenous industrial environments based on network slicing
- Automated closed-loop-control without human intervention
- Mobility aware-solution for non-stationary devices like mobile robots and AGVs

Added value:

- Mobility aware network slice life-cycle management
- Based on predictive traffic and trajectory analysis using AI

Why should I participate in the project?

- Driving the development of Self-organizing-networks in industry
- Bringing academic research on intelligent network slicing into practice
- As a vendor: integrating results (algorithms/ SW components) into your technology
- As a private network user: optimally use your network resources in production

Fraunhofer Institute for Integrated Circuits IIS/EAS

Fraunhofer Institute for Integrated Circuits IIS headquartered in Erlangen pursues international top-level research into microelectronic and information technology solutions.

Today, it is the largest of the Fraunhofer institutes.

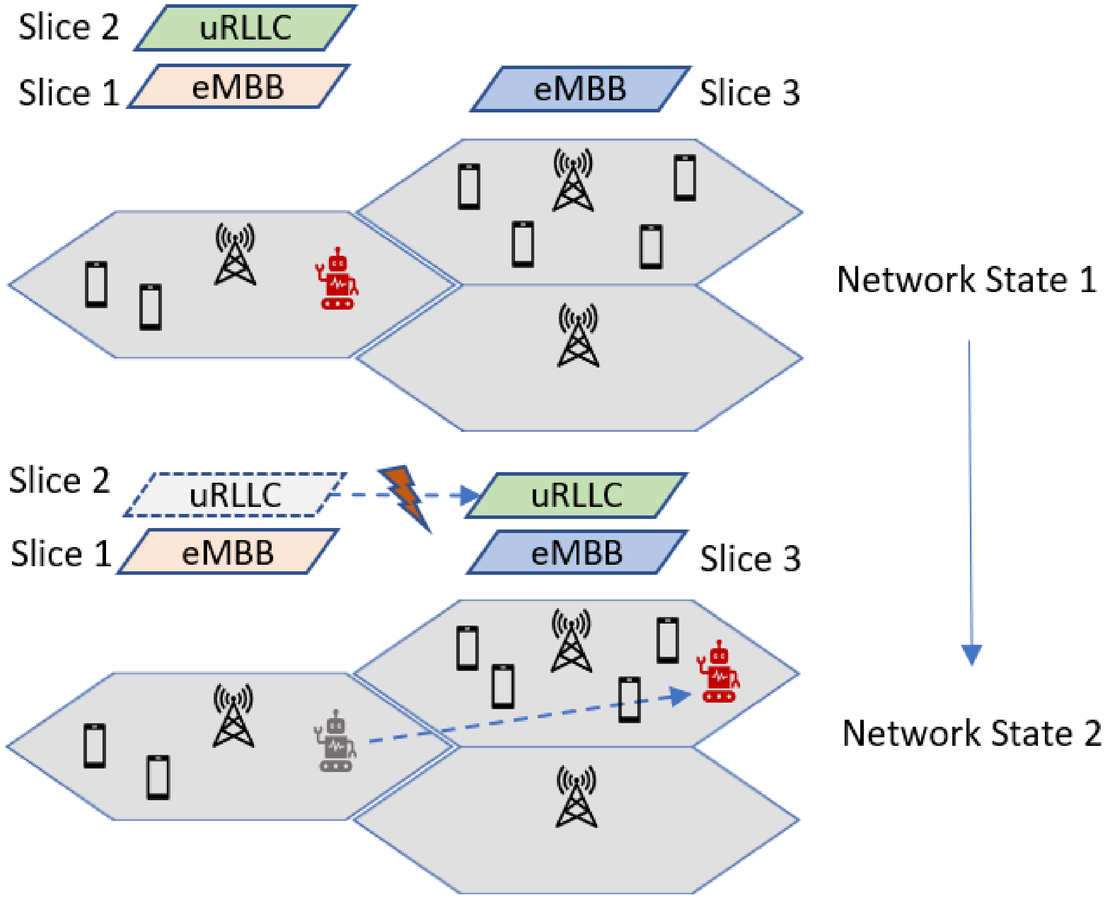
At the EAS division, we work with around 110 employees on key technologies for intelligent electronic components and innovative systems.

In alignment with the requirements and future challenges of business, with us as a partner, technological solutions come about that are:

- **safe & reliable,**
- **energy-saving & miniaturized,**
- **low-latency & robust.**

Proposal Introduction

- **Vision:** mobility-aware dynamic network slicing adapted to industrial environments
- **Motivation:**
  - optimal resource allocation in heterogenous industrial scenarios
  - ensuring the required service qualities for different device classes, including mobile devices
- **Content:**
  - implement full network slicing and life cycle management in a realistic test network
  - Using AI for predictive resource allocation optimization



Proposal Introduction

expected outcome:

- network slicing framework for vendors, campus network providers and users
- for O-RAN compliant networks: deployment in form of interconnected x-Apps and r-Apps

Impacts:

- reducing human intervention in private network management
- elevating flexible and adaptive communication for industrial settings

Project Duration: 36 months

Partner Roles

Partners sought

Profiles	Germany	Others
Testbed Operator	WvSC, FhG HHI	
Campus network service provider	Mugler	
Equipment vendor		
Providers of industrial use cases	SEW eurodrives	
ORAN component supplier		
Research institutes in Campus Network	Fraunhofer IIS	

Contact Info

For more information and for interest to participate please contact:

Anna Richter, Fraunhofer IIS/EAS

Mail: anna.richter@eas.iis.fraunhofer.de

Phone: +49 351 / 45691376

Address: Münchner Straße 16, 01187 Dresden

Presentation available via:

Join
Consortium Building Session

15th of March 11-11.30 CET

join here

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