Coordinated Control and Spectrum Management for 5G Heterogeneous Radio Access Networks

Overview

EU Horizon2020 ICT-14
Project in nutshell

• Research & Innovation Action (RIA) project under EU Horizon 2020 ICT-14
• Project duration: 1.7.2015 – 31.12.2017 (30 months)
• Budget: 6 M€ from EU
• Resource: 730 person months
Consortium

VTT, Finland (Coordinator)
EURECOM, France
CREATE-NET, Italy
Aalto University, Finland
SISC, Sweden
EICT, Germany
THALES, France
CommAgility, UK
University of Duisburg Essen, Germany
OTE, Greece
4GCellEx, Israel
Poznan University of Technology, Poland
INEA, Poland
Fairspectrum, Finland
Objectives

• Research and develop a **unified control and coordination framework** for 5G heterogeneous radio access networks (RAN), with focuses on
  • software defined networking for RANs
  • efficient radio resource modelling and management in programmable RANs
  • flexible spectrum management
Scientific objectives

- Build theoretical foundation and practical implementation of software defined networking for 5G heterogeneous RANs
- Improve spectrum reuse, radio resource management, mobility and network management in 5G heterogeneous mobile networks
- Provide a programmable control solution for 5G heterogeneous RANs to meet 5G-PPP operational KPIs
Consortium composition

Industry
- Operators
  - OTE
  - INEA
- Manufacturers
  - THALES

SMEs
- eict
- AGCeller
- Agility
- Fairspectrum

Research Centers
- VTT
- CREATE-NET
- EURECOM
- ICT
- ETT

Higher Education
- A!
- HEUV
- Untiversitat Duisburg Essen
- Offen im Denken

Map of European countries with various organizations marked.
Expected outcomes

• Concept and technology solutions to
  • improve flexibility, spectral and energy efficiency of 5G access network infrastructure
  • reduce network management OPEX in 5G networks
  • meet 5G-PPP KPIs by software defined 5G RAN solutions

• Joint testbed to
  • showcase software defined 5G RAN concept
  • verify and demonstrate new ideas in 5G RANs.

• Pre-standard and regulatory contributions to
  • 3GPP
  • ETSI
  • ECC
Contact

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