EXATEL

people behind technology

RAPID 5G

A Europe-Japan Cooperation

RAPID 5G

Radio Technologies for 5G using an **A**dvanced **P**hotonic **I**nfrastructure for **D**ense User Environments

overview

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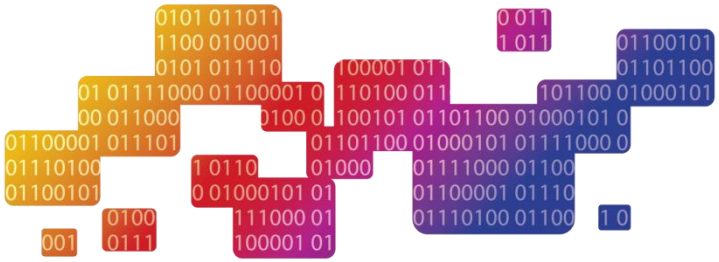
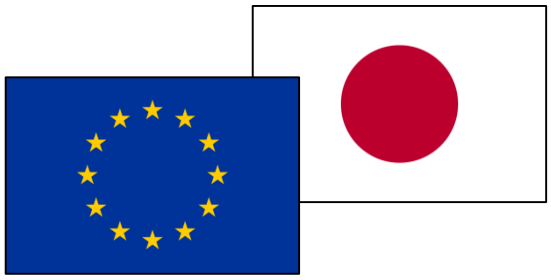
NICT

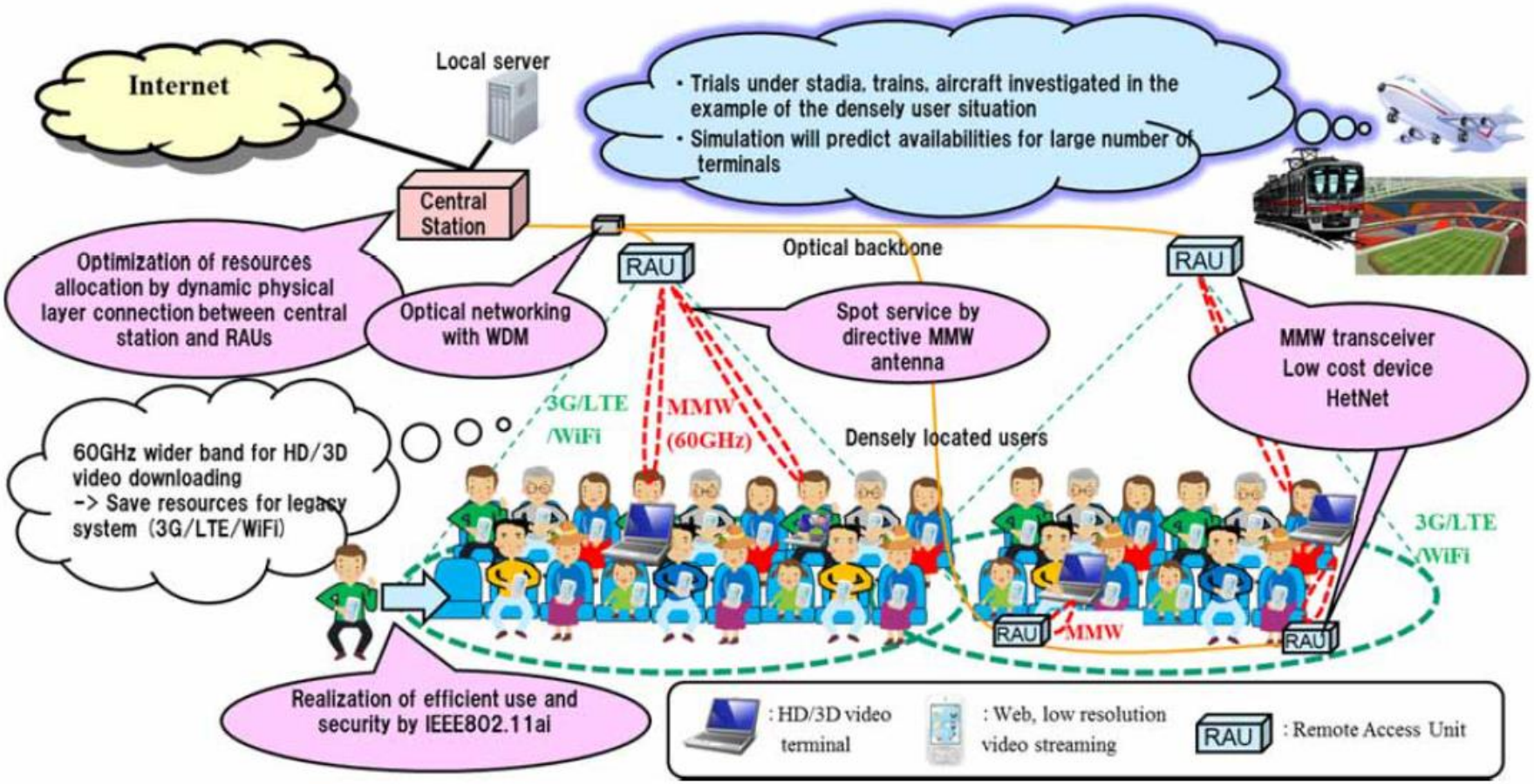


About RAPID

- 5G in mm-wave bands (60 GHz)
- UE and Japan joint team
- Members:
  - universities
  - R&D centers
  - telco operator
  - telco equipment vendors
- Tests under real conditions (e.g. stadium, shopping mall)



RAPID – high level architecture



Key objectives

- C-RAN architecture to support high-capacity heterogeneous millimeter-wave and 3G/4G RF/microwave radio access technologies through low-cost, but ultra-high-bandwidth photonic techniques for the fibre distribution
- The radio resource management of the heterogeneous wireline/wireless network using the developed mm-wave 5G and photonic technologies together with legacy 3G/4G wireless will be demonstrated in RAPID
- To meet the requirement to transport the high-frequency and wide-bandwidth wireless signals at low-cost, a novel coherent radio-over-fiber (CRoF) scheme is proposed and extremely low-cost integrated SiGe mm-wave transceivers will be developed in RAPID
- The developed solution will be tested in life-cycle assessment of the developed hardware in different real life networks will be a key objective in RAPID

Members

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