

Impact of new mobile network architectures: Will operators see significant gains in the medium term? Will 5G lessen their dependence on traditional equipment suppliers?

<https://marketpublishers.com/r/ICD4F6832E77EN.html>

Date: June 2020

Pages: 61

Price: US\$ 3,300.00 (Single User License)

ID: ICD4F6832E77EN

Abstracts

This report answers the following questions:

Will virtualisation of the 5G radio access network truly enable significant gains for operators in the medium term?

What impact will dynamic spectrum management have on 5G?

What is the timetable for a standalone (SA) core network, the gateway to true 5G?

Will operators no longer be dependent on traditional equipment suppliers? Who are the RAN mavericks?

What impact will new entrants from the US have on the RAN market?

Which operators are spearheading the adoption of 5G wireless network virtualisation?

Contents

1. EXECUTIVE SUMMARY

2. 5G AND NEW NETWORK ARCHITECTURES

2.1. Key concepts

- 2.1.1. Core principles of virtualisation applied to mobile networks
- 2.1.2. Evolution of mobile access network architecture
- 2.1.3. Introduction of Edge Computing in the infrastructures network
- 2.1.4. 5G New Radio (NR) core network: non standalone and standalone architectures
- 2.1.5. Opportunities created by network slicing

2.2. Spectrum and 5G

- 2.2.1. Spectrum: influential in network topology
- 2.2.2. The RAN's evolution: from yesterday to today to tomorrow
- 2.2.3. 5G expands available spectrum considerably
- 2.2.4. Increased network density: both a problem and a solution
- 2.2.5. Access to unlicensed spectrum
- 2.2.6. Dynamic Spectrum Sharing to facilitate the transition to an SA architecture
- 2.2.7. Appeal of millimetre wave bands

3. INITIATIVES

3.1. Alliances

- 3.1.1. Network virtualisation: transforming operators' business
- 3.1.2. Joint initiatives to accelerate an inevitable transition
- 3.1.3. O-RAN Alliance and TIP, two main alliances promoting Open RAN

3.2. RAN suppliers

- 3.2.1. New RAN equipment suppliers
- 3.2.2. The new entrants
- 3.2.3. New entrants to RAN and veteran suppliers of other network components
- 3.2.4. Veteran RAN equipment suppliers

4. ROLLOUTS

4.1. Case studies

- 4.1.1. Case study: China Mobile and its unparalleled network
- 4.1.2. Rakuten, the promises of a fully virtualised network
- 4.1.3. Telefónica

4.1.4. Vodafone UK

4.2. Lessons learned

4.2.1. Lessons on the choice of core network: NSA vs. SA

4.2.2. Lessons learned on spectrum choices and their impact on rollout strategies

4.2.3. Lessons learned on rollout strategies: the access network

4.2.4. Lessons learned on rollout strategies: the rise of Open RAN

4.2.5. How technological choices affect operators' economic equation

5. CONCLUSIONS

5.1. True 5G requires a deep-seated transformation by operators

5.2. 5G spectrum

5.3. The core network and its impact on the RAN

5.4. Mobile operators

5.5. Mobile network equipment suppliers

5.6. Recommendations

List Of Tables

LIST OF TABLES AND FIGURES

2. 5G and new network architectures

How SDN works

How iNFV works

Cost comparison between D-RAN and C-RAN on the TD-SCDMA network operated by China Mobile

Cost comparison between D-RAN and vRAN over five consecutive year in a densely populated area

Allocation of required means to services by slice

Comparison of the services' different speed and latency requirements

Pros and cons of the different types of spectrum

How calling networks have evolved to accommodate more complex and demanding uses

An approach disaggregated from the RAN makes it easier to perform rollouts and increase the network's density

3. Initiatives

One of the transformations sought by network virtualisation is the ability to be free of vendor lock-in/lock-out

Main alliances devoted to promoting the development of open vRAN solutions

Huawei, major absentee from the two main Open RAN alliances

4. Rollouts

China Mobile's ongoing RAN developments

Features of Rakuten Mobile's RAN

Telefonica's current RAN developments

A number of vRAN and Open RAN initiatives, still in the trial stage

Vodafone UK's current RAN developments

Pros and cons of NSA and SA

mmWave bands, a plus in the medium/long term

Pros and cons of open and non open vRAN solutions

A horizontal and vertical disaggregation of the RAN

Pros and cons of Open RAN depending on population density

Expected economic benefits for mobile operators adopting vRAN solutions

5. Conclusions

Mobile operators' adoption of virtualisation in the RAN

Five veteran suppliers' (Ericsson, Huawei, Nokia, Samsung, ZTE) share of the RAN market

I would like to order

Product name: Impact of new mobile network architectures: Will operators see significant gains in the medium term? Will 5G lessen their dependence on traditional equipment suppliers?

Product link: <https://marketpublishers.com/r/ICD4F6832E77EN.html>

Price: US\$ 3,300.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/ICD4F6832E77EN.html>