

Mobile Virtualization: *Impact on the Mobile Ecosystem*

Market Study
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A Market Study

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Abstract

Mobile virtualization is a hot topic in the wireless industry today. However, there is considerable lack of knowledge as to what constitutes mobile virtualization and how and when it will be implemented by mobile operators. Mobile virtualization will also enable new business models for mobile network operators, device OEMs and a new type of MVNO.

There are also potential downsides for the mobile network operators with mobile virtualization – without careful consideration for the business models, the operators could be pushed more into a ‘bit pipe’ role. However, with careful deployment and consideration for the overall impact, mobile virtualization could also allow the mobile network operators, and the vendors that support them, to realize new opportunities.

iGR defines three types of mobile virtualization, which are described in detail in this report:

- Mobile application virtualization is when an application is separated from the other apps and services running on the mobile device.
- Mobile access virtualization occurs when the mobile device connects to multiple radio access networks (RAN) transparently to the user.
- Mobile core virtualization is when the evolved packet core (EPC) is fully virtualized and run in a data center with off-the-shelf hardware.

This report provides an introduction to mobile virtualization, the potential impact on the current mobile ecosystem, profiles of the major virtualization vendors and solution providers, discussion of major threats and opportunities and a forecast of the likely mobile virtualization developments in the next 48 months.

Key questions addressed in this report:

- What is mobile virtualization?
- What types of mobile virtualization exist and how do they differ?
- What is the function of the hypervisor in mobile virtualization?
- What are the key components required for mobile virtualization?
- What are the current standards efforts associated with mobile virtualization?

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- What new business models are enabled by mobile application virtualization, mobile access virtualization and mobile core virtualization?
- What is the potential opportunity for companies such as Apple, Amazon, Microsoft, Barnes & Noble, Samsung and HTC?
- What are the opportunities for MVNOs enabled by mobile virtualization?
- What are the strengths of and opportunities for mobile virtualization?
- What are the major weaknesses and threats associated with mobile virtualization?
- What are the potential opportunities for virtualization solution providers such as Citrix, Cellrox, Cisco, Connectem, General Dynamics Broadband, Red Bend Software and VMware?
- What is the potential impact of mobile virtualization on the mobile infrastructure OEMs such as Alcatel-Lucent, Ericsson, Cisco, Nokia Siemens Networks, Samsung, ZTE and Huawei?

Who should read this report?

- Mobile network operators
- Mobile infrastructure OEMs
- Device OEMs
- MVNOs
- Virtualization software and solution vendors
- Financial analysts and investors.

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