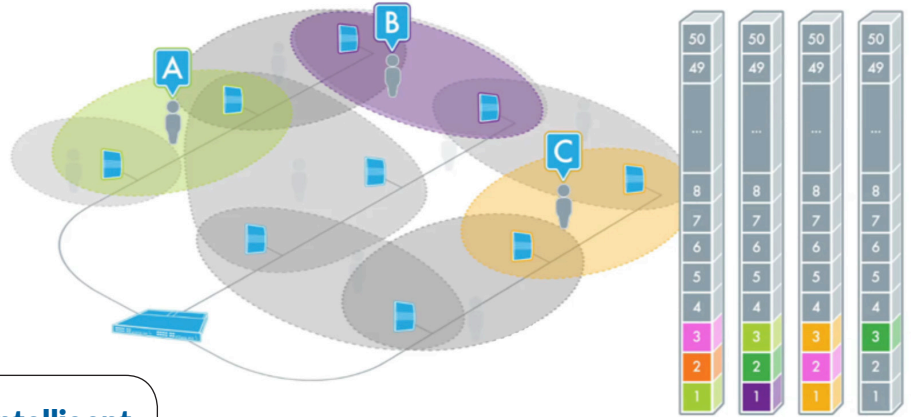


Virtualizing the Cell

What is Cell Virtualization?

Virtualization is a technique for wireless operators seeking to reduce capital costs and increase flexibility in their networks. To date, virtualization has focused on NFV for hardware-based functions, and cloud-RAN (C-RAN) enables NFV for mobile base station hardware.



Cell virtualization dynamically creates virtual non-interfering sectors on a per-physical resource block (PRB) basis.

THE NEW IP

“Virtualizing the cell brings a more intelligent way to manage radio resources and optimize the use of spectrum.”

- The New IP, April 6, 2016

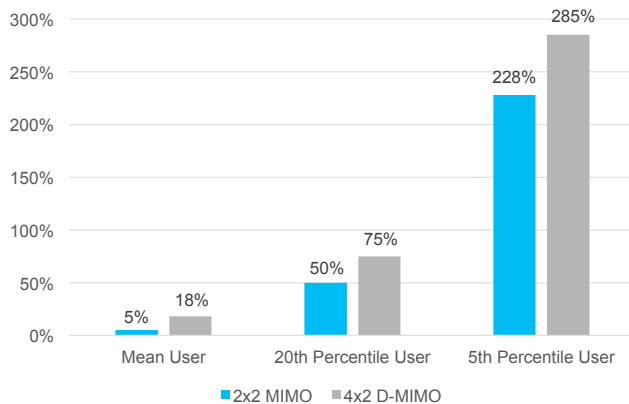
Now, cell virtualization—an emerging capability enabled by C-RAN architectures—extends the concept of virtualization beyond hardware and into the airwaves. It provides a way for operators to deliver more capacity on a given amount of spectrum without introducing cell border interference. Like network functions virtualization (NFV), cell virtualization delivers capacity more dynamically, where and when it is needed.

What are the Benefits?

C-RAN-enabled cell virtualization lets operators re-use spectrum many times over within the footprint of a single cell by dynamically defining virtual sectors. The result is multi-sector capacity without cell border interference, for a significant increase in user data rates, especially at the cell edge.

Device battery life improves because the user devices need only track a single cell and because they transmit at a lower power level. Deployment is faster and lower-cost because much of the tedious RF planning is eliminated.

Cell Virtualization Performance Improvement



ThinkSmallCell

“An important aspect of Cell Virtualisation in OneCell is that it works for all LTE devices in use today.”

- ThinkSmallCell, April 19, 2016

What is the status of Cell Virtualization?

CommScope's OneCell® C-RAN Small Cell supports cell virtualization. OneCell was created by Airvana, a leading small cell supplier acquired by CommScope in October 2015 to form CommScope Small Cells.