LTE-A HetNet

Interference Mitigation

Look around. What do you see? People on smart phones, tablets, laptops, in-vehicle Wi-Fi, streaming music and video, uploading photos, holding conference calls, playing multiuser online games...

What you don’t see is the HetNet magic that allows this to happen. If you could colorize the radio waves, what you’d see is a kaleidoscope of signals overlapping, looping, braiding, bouncing—even clashing. In short, interference.

HetNet

HetNet uses cells of different sizes (but of the same technology). This densification brings users closer to the network, and improves their experience with better data rates, higher system level capacity, and better load balancing. Unlike earlier, wherein small cells were used to fill coverage holes, small cells are now being deployed to provide additional capacity. Now we have multiple, overlapping sources—and more signal sources means more interference.

Interference Mitigation

LTE-A offers a variety of complex and advanced techniques at both the network and the device level to mitigate this interference:

1. Inter-Cell Interference Coordination (ICIC)
2. Enhanced ICIC (eICIC)
3. Further Enhanced ICIC (FeICIC)
4. Network Assisted Interference Cancellation and Suppression (NAICS)

Azimuth’s Virtual Network Environment (VNE) in the RNX platform is the first and only solution for creating and controlling a complete HetNet radio environment in the lab—including testing any and all mitigation schemes.