

5G Millimetre wave device to device or mobility, what's most important?



At the Small Cells World Summit 2017 AT&T reported a 250,000% increase in data traffic over the last decade. This appetite will continue to grow with new services, applications, and increasing teledensity. The systems supporting Smart Cities, Internet of Things (IoT), Connected and Autonomous Vehicles (CAV's), Augmented, Mixed and Virtual Reality (AR/MR/ VR) are increasing in both size and complexity for leisure and business. The only way to deliver the required capacity and throughput is with millimetre wave (mmWave) wireless communications.

Mobile devices pose particular challenges. We handle them, and mmWaves are very susceptible to being blocked by hands, fingers, bodies and heads. We hold them left and right handed, against our heads, in portrait for video calls, surfing and e.mail, in landscape for video, in landscape with both hands for gaming etc. However, we also fit smartphones to VR headsets and stream content short range over WiFi. In these type of applications mmWave links providing multi-gigabit ultra-low latency connections between smartphone or tablet and games console, router or PC are really valuable. Photo realistic AR/MR/VR, for example, and AR/MR/VR within multi-player/user environments requires high bandwidth and low latency.

At Plasma Antennas we are working with major equipment makers to solve the cost, complexity, size and performance issues of mmWave smart antennas for infrastructure (indoor and outdoor smallcells) and devices. For devices, steerable and dynamically reconfigurable, low power, Plasma Silicon Antennas (PSiAN), can be very small (10mm at 28GHz) as we can radiate from the edge of the silicon. Beams are formed and steered from a single device eliminating phase shifters and reducing computation. Our technology is very low loss reducing and consolidating amplification.

So what's more important, 5G mmWave for device to device connections or mobility? Visit plasmaantennas.com and let us know.