

As discussions rage over the next generation of communications standards for both commercial wireless and public safety communications, there is one constant experts can agree on – additional capacity and coverage is needed everywhere for consumers and public safety personnel alike.

Over the past several years much attention and capital has been spent on the arduous challenge of meeting the avalanche of wireless capacity demand from sports fans at stadiums watching their favorite sports team. Now these and other Tier 1 venues have been largely built out by the wireless operators and neutral host providers using a combination of Distributed Antenna Systems (DAS) and WiFi deployments. So until these venues need to be upgraded to support 5G, the natural question is where the focus (and spending) moves next? Typically decided by number of customers and volume of data usage, it would appear that the next types of venues to be targeted for improved coverage and capacity would be those such as hotels and conference centers, high rise offices, and hospitals.

However, the efforts to cover this next group of venues are complicated by the fact that the effort and capital investment to cover these venues needs to be spread far, far thinner than it was among the comparable handful of stadiums and other high profile venues. The number of venues to be covered quickly grows into the millions even when prioritized by number of customers and data usage. Unfortunately, at the same time, the capital available to make these improvements has been scaled back as wireless operators look for other funding models. This leaves more of the cost burden on the enterprise venue owners themselves.

At the same time on the public safety communications side of the fence, in recent years national building codes such as NFPA and IFC have added radio coverage requirements for emergency responders in all new buildings. In some cases the codes are even adopted retroactively to apply to existing buildings in addition to new construction. As these codes are adopted by municipalities across the US, an unfunded mandate is created for the enterprise building owners who must find a way to provide this coverage without becoming unprofitable or passing too much cost onto their tenants.

The best chance of facing these challenges (both commercial wireless and public safety communications) comes in viewing them together. While commercial wireless and public safety communications have many different requirements, from coverage areas to required signal levels and battery backup requirements, there are many benefits to looking at solving both needs at the same time. Not the least of these benefits is avoiding interference, as well as saving on duplicated engineering and installation costs, even in cases where largely parallel systems may be needed. With careful thought and RF expertise, a solution can be engineered to minimize the cost compared to two completely separate deployments, while ensuring that there will be minimal interference between the two different types of systems. Bird's end to end complete DAS product portfolio and professional RF services provide the ideal solution.

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