INDUSTRY BRIEF

Campus Owned 5G Network as a Strategic Asset

Until now, the need for predictable and secure outdoor wireless network performance required installation of expensive wired infrastructure that took a long time to deploy.

In response to users' desires for outdoor mobility and operational needs, campuses deployed Wi-Fi networks; however, these networks never covered the entire campus or completely met all the demands. Today, campus executives in higher ed must be convinced that deploying new technologies will answer their need to reduce costs and meet future requirements, while continuing to respond to rapidly changing environments.

CBRS-based private 5G provides you with the technology and the vision to address all of the above. We do not believe the hype surrounding 5G as a source of income from the cellular providers. However, we do believe that it can provide ways to enhance control and security for wireless communications within higher education.

It is the ideal overlay network for applications that need consistent, predictable performance such as the IoT infrastructure. Deploying this new technology will also help accelerate ubiquitous Wi-Fi coverage within the campus.

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Perspective from past technologies

In the early 2000s, as optical WAN began to emerge as the next critical infrastructure technology, a widespread debate ensued in higher education: "can we run this ourselves?". Similarly, in the early days of Wi-Fi, a smaller, less passionate debate consumed the community, "Can we run our own wireless networks?"

We believe that another such debate is about to enter the higher education main stage, "Can we run our own mobile network like we have done so with Wi-Fi?"

Higher education's response to the emerging optical technologies was the development of a few large consortiums such as CENIC, Front Range GigaPoP (FRGP), Nevada Net, Pacific Northwest Gigapop (PNWGP). These organizations quickly learned the technology and started serving its constituents.

The response to the evolving Wi-Fi needs took a similar path when Wi-Fi networks started becoming an essential part of the campus infrastructure. We believe that the debate within the community regarding private 5G will end the same way as previous debates - with higher ed campuses opting to have control over wireless networks in their campuses.

The sooner you start using the new technology, the quicker your teams will become proficient and start to develop your own use cases.

Where can CBRS / 5G help you?

Today we are in the early stages of private 5G deployments. We need to learn the technology , make decisions regarding the operators, and quickly enable new services needed due to the Covid19 pandemic – all while reducing costs.

If this sounds like a very tough place to be, it is! Funding has become scarce and is largely being used to enable remote learning and outdoor teaching.

This is exactly where private 5G can help you. Private 5G deployments are significantly faster and less expensive than current technologies and can reduce the infrastructure TCO by up to 75%.

Some of the current promises of private 5G include enhanced predictable wireless performance with better control and security of campus assets. Improved performance is derived from the core characteristics of the cellular wireless technology. It enables the infrastructure to have full control of traffic flows, mobility events, application service level objectives, and battery / power management on wireless devices.

With growing concerns about intellectual espionage, research institutions must create a more secure infrastructure for researchers with significantly more granular control over their assets.

Having a campus owned and operated private 5G network can help reduce the risk for researchers and critical infrastructure components, such as building management systems and the campus IoT infrastructure.

Summary

In order to maintain technological relevance, one must include long-term deployment of private 5G technology as a strategic asset for the organization. Long-term planning must start with small steps, leveraging current projects that can be completed quickly and in a cost-effective manner. This short-term approach to deploying the technology will prepare you for the onslaught of students and infrastructure devices that will arrive on your campus within the next 18-24 months.

We are looking forward to hearing your perspectives and sharing our insights along this journey.

Let's connect at **hello@celona.io**.

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