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CASE STUDY

Revolutionizing Indoor Training Infrastructure with GameChanger®
USF Indoor Performance Facility Project

INSTALLATION PARTNER:
University of South Florida

LOCATION:
Tampa, FL, USA

INDUSTRY SEGMENT:
Higher Education

> "With GameChanger, we were able to cut our work and risk in half, streamlining both the installation and ongoing maintenance of our network infrastructure."
>
> — NATHAN RICE
>
> IT Operations Manager, Infrastructure design and project coordinator, USF

The Introduction

The University of South Florida (USF) recently embarked on a pioneering project to upgrade the low voltage infrastructure of their indoor practice facility to support Catapult, an advanced player tracking system. Catapult uses a network of cameras and sensors to monitor player movements and biometrics in real-time, providing invaluable data for performance analysis and injury prevention. This sophisticated system requires a robust and reliable network infrastructure to ensure accurate data capture and transmission.

This case study explores how GameChanger enabled USF to overcome significant challenges, streamline their design process, and enhance their infrastructure for optimal performance, setting a new standard in athletic facility design.

The Challenge

Catapult, a leading provider of sports technology, equips athletes with wearable units and deploys a network of cameras and sensors to track metrics like player load, velocity, and distance. These systems are essential for sports science, providing real-time data that coaches and sports scientists use to optimize player performance and prevent injuries.

Traditionally, such systems have relied on a dense network of Intermediate Distribution Frames (IDFs) and multiple switches strategically placed throughout large facilities. While effective, this approach often requires significant investment in terms of money, time, and physical space. The existing infrastructure design at USF's football practice facility followed this conventional approach, which included placing IDFs near the 50-yard line and in the end zones.

However, this setup posed several logistical challenges, including the need for additional cooling and electrical support, and took up valuable space within the facility. Moreover, the complexity of the setup increased the number of devices that could potentially need servicing, adding to long-term maintenance efforts and costs.

Innovative Solution

Nathan Rice, leading the project for USF, recognized an opportunity to leverage GameChanger's innovative 200m radius design. This approach significantly reduced the number of IDFs needed, simplifying the infrastructure while ensuring robust performance. With GameChanger, Nate was able to eliminate the IDFs near the 50-yard line, maintaining only those in the end zones. This not only reduced the infrastructure's footprint but also enhanced safety by removing equipment from high-traffic areas where it could be damaged or interfere with players.

USF's confidence in GameChanger was built over two years of rigorous testing within their IT department, including bench testing and deployment in smaller-scale projects. This extensive track record provided the foundation for adopting GameChanger on a larger scale within the facility.

> "We pioneered this approach with GameChanger, but it won't be long before everyone follows our lead. The benefits are too clear to ignore."
>
> — NATHAN RICE
>
> IT Operations Manager, Infrastructure design and project coordinator, USF

Implementation

The implementation process was a collaborative effort between USF, Catapult, and the GameChanger team. Catapult's system, which relies on precise placement of anchor devices to capture data from wearable units on athletes, required a network that could handle the demands of their Local Positioning System (LPS) used inside the facility. The GameChanger cabling system, verified for performance over extended distances, proved to be the ideal solution.

The simplified network design reduced the number of switches from four to two, cutting down on the complexity of the setup. This reduction in switches not only simplified the installation process but also made ongoing management and troubleshooting more efficient.

Benefits and Results

The benefits of this innovative approach were immediately clear:

Cost and Time Efficiency: The infrastructure required significantly less equipment, reducing both installation time and costs. The streamlined design minimized the need for additional electrical and cooling support, further lowering expenses.

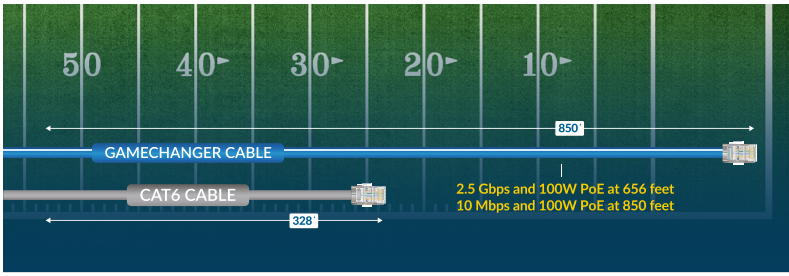
Space Optimization: By reducing the number of IDFs and consolidating equipment into fewer locations, valuable space within the facility was freed up, enhancing both functionality and safety.

Operational Efficiency: Fewer switches to manage remotely meant less maintenance and fewer potential points of failure. This not only reduced the risk of downtime but also made the system more reliable and easier to manage.

Validation and Future Use Cases: The success at USF is expected to influence future Catapult installations. The test results, once received, will provide concrete evidence of the system's reliability over extended distances, making GameChanger a compelling choice for other facilities looking to optimize their network infrastructure.

Conclusion

Rice's innovative use of GameChanger has not only revolutionized USF's Indoor Performance Facility infrastructure but also set a precedent for future projects. By reducing the physical footprint, cutting costs, and simplifying maintenance, GameChanger has proven to be a transformative solution that aligns perfectly with the needs of advanced sports technology like Catapult. This case study highlights the importance of embracing new technologies and taking calculated risks to achieve superior outcomes. The success at USF positions GameChanger as a key component in the future of sports facility design and infrastructure management.



> "The system performed exceptionally well with GameChanger, exceeding our expectations and proving its reliability over extended distances."
>
> — MITCHELL WINNE
>
> Sr. Field & Service Engineer, Catapult

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To learn more about GameChanger and other innovative products, visit PaigeDatacom.com/GameChanger or call 888-423-8947

GameChanger Part Numbers:
258310333 - Riser, Yellow w/ White Stripe
258300336 - Plenum, Blue w/ White Stripe
258300310 - Plenum, White
258330804 - OSP, Black
258340804 - OSP Shielded, Black
258802404 - ITC-HL, Armored, Black

U.S. Patent Nos 10,453,589, 11,107,605, 11,562,835, 11,646,133 and 12,142,389