

Penn State Health Milton S. Hershey Medical Center Case Study

Intenna Systems, Inc.



“We are committed to enhancing the quality of life through improved health, the professional preparation of those who will serve the health needs of others, and the discovery of knowledge that will benefit all.”

**Penn State Health
Milton S. Hershey
Medical Center
Mission**

Overview of the Milton S. Hershey Medical Center

In 1963, the M. S. Hershey Foundation donated \$50 million to The Pennsylvania State University to establish a medical school and teaching hospital in Hershey, PA. With this gift and \$21.3 million from the U.S. Public Health Service, the University built both Penn State College of Medicine and the Milton S. Hershey Medical Center. The University accepted its first students in 1967 and the medical center accepted its first patient on October 14, 1970. Today Hershey Medical Center is the flagship hospital of Penn State Health and shares the Hershey campus with Penn State Children’s Hospital, Penn State Cancer Institute and Penn State College of Medicine.

Intenna Systems & Penn State Health

The relationship between Intenna Systems and Penn State Health began in 2012 when Intenna responded to a Request for Proposal (RFP) to deploy a distributed antenna system (DAS) network in the new Penn State Children’s Hospital building, a 300K square foot building attached to Hershey Medical Center. The DAS went live when the Children’s Hospital opened in late 2013 and was designed to enhance cellular services as well as VHF & UHF paging frequencies. This single-zone project initially enabled Verizon service and two-way paging applications, but it laid the foundation for future expansions to occur over the next several years.



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Children’s Hospital

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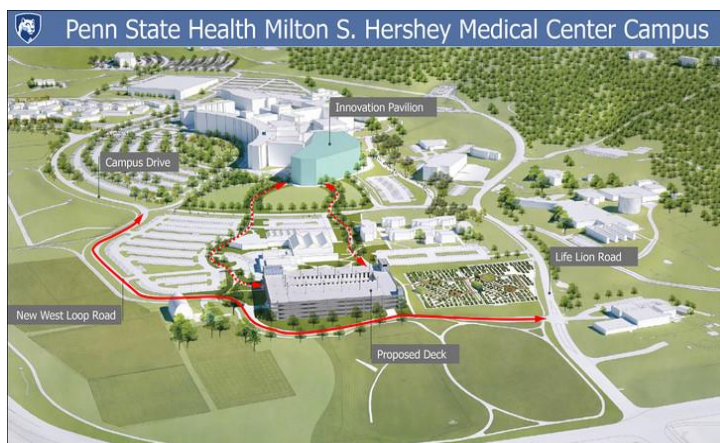
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Penn State Milton S. Hershey Medical Center T-Mobile Signal Source Unit

Phase 1 DAS Expansion

The success of the Children's Hospital project proved over time that DAS networks provide an integral foundation for a robust clinical wireless environment. Moreover, this environment enhances the ability of hospital staff to perform their duties while also increasing patient satisfaction. Thus, Penn State Health approved funding in 2017 for a sizable expansion of the multi-technology DAS to cover 1.7 million square feet of the primary superstructure of Hershey Medical Center. Intenna completed the DAS expansion in early 2018 and added AT&T service around the same time. For network capacity and bandwidth purposes, the DAS was now divided into five zones.



Phase 2 DAS Expansion

The next phase of the DAS expansion began during the second half of 2018 and was

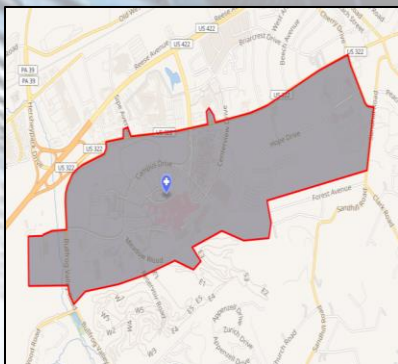
completed in early 2019. The scope of work for this phase included four non-clinical nearby buildings, a fitness center and a long underground utility tunnel. Altogether this scope encompassed more than 500K square feet of additional DAS coverage and brought the total number of zones to eight. T-Mobile joined the DAS shortly after the completion of the Phase 2 expansion and Sprint joined in early 2020.

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Adding More Technologies to the Mix

In late 2019 Penn State Health funded an upgrade to accommodate two more technologies over the converged DAS backbone that now provides wireless coverage to over 2.5M square feet of the medical center campus. This much-anticipated upgrade enabled frequencies for in-house two-way radios and the local county public safety network. Both radio platforms operate in the UHF frequency band. Incorporating these technologies into a DAS network requires specialized engineering design capabilities, as well as partnerships with manufacturing companies to design and custom-build filtering and other related components. The Intenna design and field engineering teams worked diligently together along with key stakeholders such as hospital staff and county officials to enable this complex layer on the DAS.



Penn State Milton S. Hershey Medical Center Campus Coverage

Continuing Growth

Penn State Health continues to evolve its capabilities to provide the highest quality healthcare at the Hershey Medical Center. Several ongoing capital construction projects will expand the size and footprint of clinical buildings on campus. Each project incorporates funding to expand the DAS so that these new spaces have access to the same indispensable wireless technologies that staff and patients have come to expect in recent years.

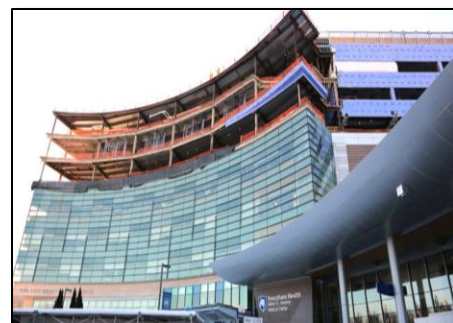
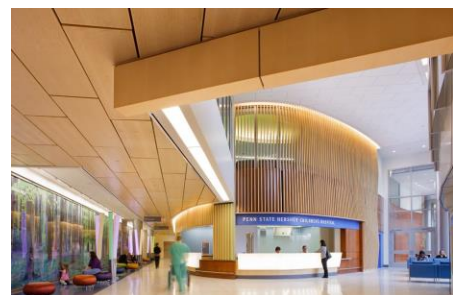


Image taken of the construction on the Penn State Children's Hospital



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Jim Sharbaugh during a virtual interview with Intenna Systems

“The delivery, the follow up; is as true and professional, as three dimensional as it gets..”

Jim Sharbaugh
IS Network-Voice
Systems
Penn State Health
System Information
Services

DAS Monitoring & Maintenance

From day one Penn State Health recognized the importance of DAS network reliability and chose to protect its investment by utilizing Intenna’s monitoring and maintenance program. Intenna offers a robust set of service level agreements (SLAs) for customers that desire proactive monitoring and maintenance of the network. Utilizing a custom-built remote monitoring platform, Intenna engineers are notified immediately when alarms on the DAS occur. This allows for a quick response in identifying and resolving hardware and signal source issues that arise from time to time in a dynamic wireless environment.



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“Intenna Systems designs, builds and maintains some of the most complex indoor wireless networks available in the enterprise and service provider segments of the industry. Over two decades of experience provide our staff with unparalleled knowledge in designing, building, optimizing and maintaining customized distributed antenna systems (DAS) and small cell solutions to fit your specific needs. We are distinguished by our commitment to quality and delivering the right solution to meet our customers’ diverse communications needs.”

About Intenna

Founded in 1998, Intenna Systems, Inc. is a leading provider of customized, cost-effective, in-building wireless networks. With over two decades of design and deployment experience, Intenna continues to provide comprehensive cellular and public safety network DAS solutions to an impressive resume of healthcare, corporate, hospitality, public venue and government clients nationwide. We are distinguished by our unparalleled experience, ability to navigate challenging environments, commitment to quality and customer focus. Reach out to Intenna today to learn how we can help you create the wireless environment that your employees, customers and patients now require.

Contact

E sales@intennasystems.com
T 609.714.8268

13 Fostertown Road
Medford, NJ 08055

