

# University of Pennsylvania

Philadelphia, PA



*Aerial view of the University of Pennsylvania in Philadelphia, PA*

## About University of Pennsylvania

The University of Pennsylvania (Penn), a private Ivy League university located in Philadelphia, PA, was founded in 1740 by Benjamin Franklin. As of Fall 2016, the college is attended by nearly 25,000 students and has a total regular workforce of over 17,500 faculty and staff. Penn's West Philadelphia campus comprises 299 acres with 215 buildings (excluding the Hospital of the University of Pennsylvania).

## ICONICS Software Deployed

Penn selected ICONICS' GENESIS64™ HMI/SCADA suite. System Integrator e-Magic Inc. with offices in Jersey City, NJ, USA and Toronto, Ontario, Canada ([www.e-magic.ca](http://www.e-magic.ca)), managed the project deployment throughout its four phases.

## Project Summary

The University of Pennsylvania sought to create a unified HMI/SCADA system for 120 buildings, equaling nearly 14 million square feet, throughout its Philadelphia, PA campus. The university wanted the means to manage connected systems via its centralized Operations Control Center (OCC) in order to gain complete visibility into building automation equipment and facility operations. The new system would replace an existing one that the operators found to be obsolete.

The selected HMI/SCADA solution would be required to monitor and control critical equipment across multiple campus buildings including those related to HVAC systems, chiller plants, electrical substations, lighting and space conditions. In addition, the university required system level redundancy in order to maximize the uptime of these



*Penn's Operational Control Center (OCC) running ICONICS GENESIS64™*



*Students gathered on Penn's Philadelphia campus*

building systems. Also, whichever vendor was chosen would need to work with third-party contractors responsible for implementing each phase of deployment and work through the replacement of the entire campus command and control system while all the buildings involved remained occupied and in use.

Ultimately, Penn settled on ICONICS GENESIS64. The installed solution now provides an expert alarm system that provides messaging capabilities whenever building equipment is not performing within its operating conditions. With the new solution in place, the OCC can then adjust systems accordingly. GENESIS64 also provided the university with built in redundancy to ensure maximum uptime. Operators are now able to quickly and efficiently identify equipment that needs attention. This helps to save time and labor costs by addressing certain types of faults remotely using a centralized command and control dashboard.

### Benefits of the System

Penn's goals for their campus-wide HMI/SCADA solution were to streamline operations, increase energy efficiency and sustainability, and enhance tenant experience, all with an eye towards financial optimization. The university was able to gain real-time visibility into multiple buildings throughout its main campus. The highly scalable platform allowed for rapid deployment which accelerated implementation throughout each phase of the project. The centralized monitoring and control throughout the campus provides Penn with extremely efficient and coordinated operations.

### Conclusion

The University of Pennsylvania was able to meet its unified HMI/SCADA project goals with ICONICS, as well as achieve an additional benefit regarding its critical laboratory facilities. With the added continuous monitoring abilities, the integrity and reliability of various research studies and experiments has been ensured, meeting an important priority for a nationally ranked research university.



*A Campus Building Mechanical System Monitored by GENESIS64™*



*Penn's Krishna P. Singh Center for Nanotechnology*