Kista Science Tower
Stockholm, Sweden

Customer Success Story

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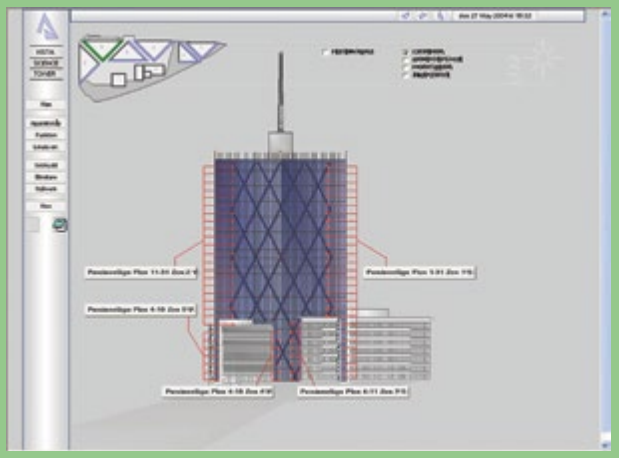


Window Blind Control Screen

> *"ICONICS software has enabled us to build an independent open system for the Kista Science Tower. The GraphWorX design application in GENESIS32 allowed us to create rich graphics and we were able to take advantage of reusable graphic components".*
>
> **Joakim Platbarzdis**
> Integrator
> CIT Sweden AB

About The Kista Science Tower

The Kista Science Tower complex is comprised of six buildings, with the tallest spanning 32 stories. This state-of-the-art complex is located in one of the most dynamic IT regions in the world. Each floor of the Kista Science Tower houses approximately 700 square meters of office space. The glass frontage gives this tower an attractive look and plenty of sunlight for tenants, including Network Services, Unisys, Symantec and more.

ICONICS Software Deployed

GENESIS32™ is used to monitor and control the KONE elevators, lighting, HVAC and the windows blinds for the Kista Science Tower. OPC-To-The-Core™ technology is a key component of these high-profile automation applications.

Control Integration Technology, Sweden AB was the main integrator for Johnson Controls working closely with NCC construction. Having OPC connectivity native to GENESIS32 made it the premier choice for visualization. AlarmWorX™32 Multimedia and WebHMI™ are also in use. WebHMI™ provides full read/write access remotely via any standard Internet Explorer. AlarmWorX Multimedia is responsible for serving all alarms in real time to those who need them.

Key Features

The biggest challenge was to have an open infrastructure where all monitoring and control could be looked at as a single system. OPC fits this model very well. With OPC as the open architecture, this allows for all systems and controllers a common platform for communication. Since OPC is used, all systems can be monitored by ICONICS. GENESIS32 can connect to any OPC server throughout the Kista Science Tower.

This connectivity includes communication to the KONE OPC-DA server running on Linux. GENESIS32 components, such as DataWorX™32, AlarmWorX™32, and TrendWorX™32, are bridged to the Linux server through a separate Windows Server. Other OPC connectivity from GENESIS32 includes connections to Johnson Controls and Schneider Electric devices.

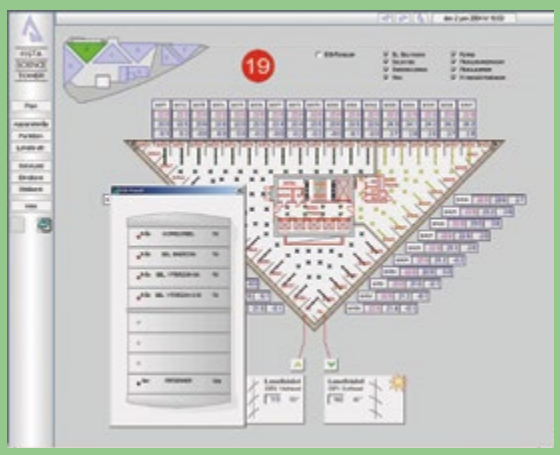
Project Summary

GENESIS32 is connected to a weather station that continuously monitors the intensity of the sun. This data is used to control the angle of the blinds and awnings for the entire building. OPC data from the JC.N1 OPC Server connects via DataWorX32 to the CCEIB OPC server to send the proper setting to the blinds. Three times a day, the angle of the blinds is adjusted based on a calculation determined from the sun's intensity, time of year, and building zone.

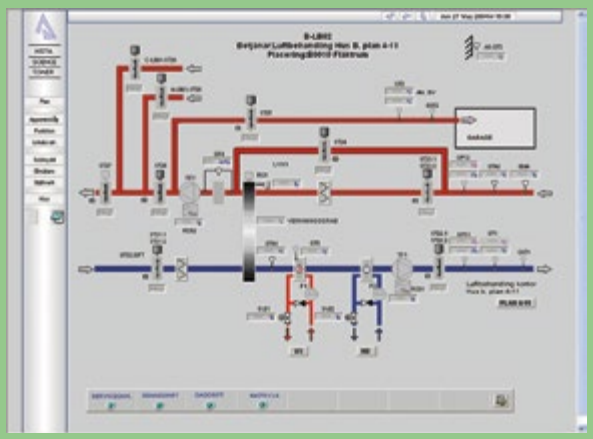
In addition to keeping the office workers comfortable, the blind-control system saves on heating and air conditioning. The control of the blinds and awnings is also connected to the fire system. In the event of an emergency, the blinds are automatically opened and the awnings are pulled back within minutes. The KONE elevators are continuously monitored for power failure, fire, or other faults by the GENESIS32 system.

A visitor control system is also built into the operation of the elevators. Visitors to the Kista Science Tower are given a programmable access card. This card only allows access to the floors the visitors need to access.

OPC connectivity is provided from GENESIS32 to Johnson Controls, Schneider Electric, and EIB hardware. There is also an OPC bridge to the KONE elevators. Total I/O points exceed 15,000 points. Microsoft SQL Server is used for all data logging. In total, 2,400 rooms are controlled with 25 network controllers and 18 control cabinets.



Kista Science Tower Floor Control Screen



Air Circulation Handling Controls

Conclusion

Future development plans are underway to allow building occupants to view the status for their own part of the building.

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