HEALTH CARE

Project Profile

World-Renowned Cancer Research Center Chooses Andover Controls

The Moffitt Cancer Center Tampa, Florida

The mission of the Moffitt Cancer Center in Tampa, Florida is simple: *To contribute to the prevention and cure of cancer.* Although this goal is not an easy one, Moffitt is leading the charge for the continued growth of cancer research.

It is no surprise then that Moffitt Cancer Center exemplifies technology on the cutting-edge, and that they chose an Andover Controls building automation system for this world-renowned patient care and cancer research facility. The Andover system at Moffitt provides not just HVAC control, but security management, tank monitoring, parking control, and integration with a *Digital Sentry* CCTV system by *Integral Technologies*, Andover's new digital video systems division.

The design, engineering, and installation of the first Andover Controls system at Moffitt was done by local Andover Representative, *Roth Bros.* of Tampa, Florida. *Roth* continues to partner with Moffitt Cancer Center today, for retrofit projects, new installations, and new and creative applications of the Andover system.

Committed to a Cancer-Free Future

The Moffitt Cancer Center, which opened in 1986 as a private, not-for-profit facility, was named for H. Lee Moffitt, former Speaker of the Florida House of Representatives, who was instrumental in the Center's creation. (Construction of this $70-million, 384,000 square foot (35,673 m^2) facility was funded largely by proceeds from Florida's cigarette tax.) The Center is licensed for 162 beds and serves more than 4,500 inpatients and 100,000 outpatients yearly. It is the only hospital in Florida designated by the National Cancer Institute as a comprehensive cancer center, joining an elite group of institutions dedicated solely to solving the problem of cancer. Located at the University of South Florida, Moffitt constitutes a growing component of the teaching and research activities of the USF College of Medicine.

Andover Controls

A Balfour Beatty Company

Research Tower Project
Under Construction

The 1995 opening of the Moffitt Research Center, a 101,352 square foot (9,415 m^2) facility located across the street from the Cancer Center, further advanced the Center's research mission by dramatically increasing the amount of laboratory space dedicated to exploring cancer. A 1999 expansion to this building included the addition of two York 350-ton chillers controlled by Andover via an XDriver; and also an XDriver interface to the Edwards fire system, which provides information to the other buildings. Andover also controls the chill water flow, cooling tower operation, and works with the Phoenix control system and the Graham VSDs to supply air and exhaust air for the labs.

By the end of 2003, Moffitt will open the door to the new Research Tower Project. This new facility will double the size of the existing research and outpatient clinical space, and allow the Center to better meet the growing demands of a state that has the second highest level of cancer.

Three Generations of Andover Technology

An *AC256* system, Andover's first-generation building control system, was installed at Moffitt during its construction in 1986. The system was upgraded to *Infinity*, Andover's second-generation system, in 1992. According to Phil Meinke, Sales Engineer for *Roth Bros.*, the Andover system at Moffitt was used strictly for temperature control at first. Card access control was added in 1993. Perimeter doors and doors leading to high-security areas; for example, the pharmacy and drug storage rooms, are controlled and monitored by the Andover system.

Moffitt Cancer Center, always looking for the newest technology, began installing Andover's third-generation product line, *Continuum*™, in 1999. Seven CyberStations™, *Continuum's* Windows NT-based front-end workstation, will network the entire Moffitt complex via an Ethernet LAN. Along with the main Cancer Center building, *Continuum* will control and monitor the entire Moffitt Research Center and Eye Institute across the street, a new parking garage and Central Energy Plant, and also the new Research Tower under construction now.

Continuum Will Control and Monitor Vivarium

Among the many critical areas at Moffitt that the *Continuum* system will control and monitor is the Vivarium, located in the Moffitt Research Center. Here important clinical drug studies will be carried out on 100,000 mice housed there. Environmental conditions in the mice rooms must meet stringent federal government guidelines so as not to sway research results. The mice are kept calm if temperatures, humidity, lighting, air pressure, and airflow are maintained within a specified range. *Continuum* will also monitor the pressure in the water system that supplies the mice cages and monitor the flushing sequences to assure that the water remains constantly sterilized. Sixteen Andover Controls DCX 250 touch-screen displays will be mounted on the walls outside the mice rooms, providing the lab staff the ability to monitor conditions inside the rooms without disturbing the "tenants".

Work Orders Integration Using Continuum

The Facilities Department at Moffitt Cancer Center has recently begun interfacing the *Continuum* system with their new CMMS (Computerized Maintenance Management System), *Four Rivers TMS Pro for Healthcare®*.

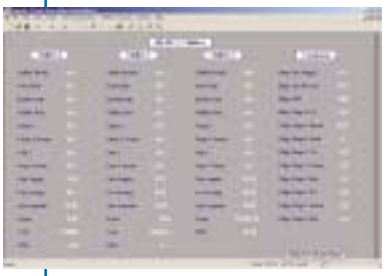
Dean Head, Director of Facilities at Moffitt, is excited about the prospects this integration brings to his department. "It will provide us tremendous labor-savings in terms of work orders and the never-ending clerical work they require. Integration between these two systems means that a *Continuum* alarm on a malfunctioning piece of equipment can automatically page a mechanic and send an e-mail to his hand-held device with the appropriate work order instructions to fix the problem. The endless typing of paper-based work orders can all but be eliminated!

Dean Head, Moffitt's Director of Facilities, inspects some Andover controllers

The Facilities Department also plans to link the preventative maintenance work orders generated by their CMMS to the *Continuum* system. By doing so, equipment maintenance can be done on a more accurate schedule based on actual equipment runtime usage versus calendar scheduling. "This ensures minimum equipment downtime for us while optimizing our maintenance budget," says Dean.

Tank Monitoring

As part of the on-going construction at Moffitt, two 10,000-gallon fuel tanks will be installed underground and used to fuel the Center's boilers. According to Ed Shelp, a *Roth Bros.* Project Manager, the *Continuum* system provides alarm monitoring of fuel levels, lead detection, etc., and performs automatic fuel pumping from the main tanks to the day tanks.



A CyberStation Chiller Status Screen

Moffitt Makes the Switch to Digital CCTV

Access control at Moffitt continues to grow. Currently, 17 card readers control access into the Cancer Center after hours and on high-security areas 24/7. Access into the new 800-car garage will also be under *Continuum* control.

Moffitt is in the process of changing over from an analog CCTV system to digital, with the installation of an *Integral Technologies'* Digital Sentry video system. More than 250 cameras will be in use throughout the Cancer Center and garage when the installation is complete. Phil Meinke of *Roth Bros.* says the Moffitt security staff is looking forward to the benefits digital video over analog will bring them. No more cumbersome and outdated VCR tape backups that sometimes take days to review. "With Digital Sentry," says Meinke, "video assessments of any alarm incident can be done quickly via a pop-up video window on the *Continuum* CyberStation workstation screen. *One* integrated access control and digital video system means just *one* computer on an operator's desk!"

Dean Head working at the CyberStation

Continuum—Limited By Only Our Imaginations

"Our goal in using the *Continuum* system here at Moffitt is simple," states Dean. "We want to manage our equipment more efficiently and utilize our full-time employees more efficiently. *Continuum* allows us to do both. *Continuum* is Windows NT-based, so it easily integrates into our desktop applications. *Continuum* reports can be dropped into Excel spreadsheets and PowerPoint presentations, equipment work orders can be generated automatically, and alarms sent via Outlook e-mail. *Any* system on the market these days can start and stop equipment — they just aren't as *flexible* as *Continuum*. The integration between systems we receive with *Continuum* is truly what makes this system effective for us. Plus the fact that we have people here at Moffitt willing to 'push the envelope', so to speak ... we are limited on what *Continuum* can do for us by only our imaginations."

PROJECT AT A GLANCE:

Project Type:
Integrated (HVAC & Security)

Project Name:
H. Lee Moffitt Cancer Center & Research Institute

Location:
Tampa, Florida

Market Segment:
Healthcare

Number of Buildings:
6 (Future: 9)

Total Square Feet:
300,000 (Future: 630,000)

Andover CyberStation Controls Equipment Installed:
7 – *Continuum* CyberStation workstations
1 – *Continuum* NetController
6 – CX 9200s
49 – SCX 920s
10 – SCX 900s
2 – LCX 810s
110 – TCX 865s
2 – TCX 851s
58 – TCX 850s
26 – TCX 840s
3 – ACX 780s
1 – ACX 781s
6 – IOU panels

Network:
Ethernet TCP/IP

Applications:
Temperature and humidity control
Access control
Digital CCTV
Tank monitoring
Power monitoring
Lighting control
Water monitoring/Irrigation
Smoke control
Phoenix fume hood monitoring
Paging

Third-party equipment and/or drivers:
Edwards fire alarm system
York chillers
Future:
- VFD driver
- ASCII Communication driver
- Power Logic driver
- Lighting driver

Number of Controlled Doors:
17 (Future: 125)

Number of Cardholders:
1,100

Total System Points:
1,500 (Future: 5,500)

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