



network operation center



swing arms on monitors



*“The reason we went with ITG is because of their value engineering.”*  
Project Manager



## Value-Engineering at its Best

When Innovative Technology Group (ITG) is brought in to bid on a project, they're not only bringing AV specialists to the table, they are a partner that works within your budget, provides the best technical solution for your dollar, and designs with the end user in mind. Take, for example, a Chicago-area engineering office that Innovative Technology Group recently completed. ITG was brought in to provide recommendations for a facility build-out that the IT department had just started with a local consultant. "We came in answering questions, specifications, and making recommendations that would save them money right from the start," explains George Brosie, Director of Engineering for Innovative Technology Group. "Once we were awarded the project, we worked with the client to value engineer everything - right down to a price level that suited their needs and took out some of the *extra* functionality that was not necessary and only added to the cost of the project."

According to the Project Manager of this facility, "The biggest challenge was trying to make the Consultants ideas work within a realistic budget." He continues, "The reason we went with ITG is their value-engineering. They were able to take what the Consultant gave us, and come back with a solution that was comparable or better - for less money, yet still maintain the quality that we needed."

## The Rooms

As a facility build-out, this project included several different rooms created with the end-users in mind: trainers, directors, executives and IT professionals. The main area of work involved the installation of a 3 x 6 video wall (network operations center or NOC). The NOC sits adjacent to the War Room which contains a projector and screen, and operates via the projector and satellite IR remotes.

At the rear of the NOC are 4 small offices used to display shift information. They contain a monitor on the wall, satellite

receiver and analog wall plates. Small conference rooms line up behind the reception area with LCD monitors in each one.

*“All of the rooms have been designed with digital and analog computer capabilities.”*

To the side of the reception desk is a video conferencing room that contains 2 plasma monitors, credenzas, and OFE video conferencing codec. With a Crestron® touch panel, users can video conference all around the world at the mere touch of a button. Directors' offices (with wall-mounted LCD monitors all controlled from an IR remote for satellite) line the back end of the facility. A cafe break room also contains an OFE monitor hung from the ceiling with satellite sources.

The other main area of this facility contains a divisible training room. When the rooms are combined with a sliding wall, all 16 mics connected on the tables can be used for teleconferencing. Each projector in their respective rooms will display the same image when combined.

## Cost, Weight, and HVAC Challenges

One of the biggest challenges to this project was working with recommendations from a Consultant - within the client's budget. The initial proposal from the Consultant far exceeded the client's workable budget, which meant that several modifications had to be made to the initial scope of work while maintaining the desired functionality of the system. Explains Mr. Brosie, "We figured out how to value-engineer all of their rooms down to functionality versus cost. This included saving them money on their conduit and construction infrastructure."

Then there was the aesthetics and structure of the video wall. Although the original design of the wall included rack space, no one truly understood the implications involved in the actual technical infrastructure required. As a result, ITG had to work with the design to get the conduit run and all of the equipment into the allotted space AFTER the wall was built. New slideouts were created and monitor weight loads were determined so that they could add swing arms to get *behind* the monitors for service. According to Mr. Brosie, "We had to work with the structural engineer to create drawings with conduits to show the weight when the swing arms were closed, when they were open, and the amount of downward pressure that the whole wall could withstand when this occurred. We basically told them to re-work the design of this wall so that you couldn't pull it down with a Mack truck!"

Because the monitors and racks needed to be cooled, ITG also designed a conventional air system that could be tied into the client's return, so all of the racks and monitors would be continuously cooled by the HVAC already existing in the room.

## The Results

The NOC is beautiful: a 3 x 6 video wall lined in wooden panels. To achieve this, every seam had to be drawn out so that the seams of the monitors lined up with the wooden panels. That, in itself, was a major endeavor between ITG and the millwork company.

The facility build-out was a huge success with technology and functionality that will not only assist in workflow efficiency, but also help in controlling costs now and in the near future.



conference room



divisible training room



cafeteria



crestron control in video conferencing room

