



SOUND & COMMUNICATIONS

AV FOR SYSTEMS INTEGRATORS, CONTRACTORS AND CONSULTANTS

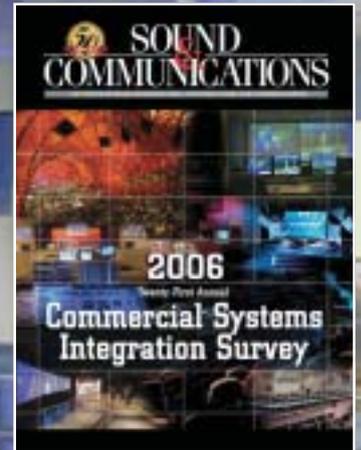
GAMERS' PARADISE

IMMERSIVE AV ENTERS A WHOLE NEW 'WORLD.'

SNMP: SIMPLE? NETWORK MANAGEMENT PROTOCOL

AN OVERVIEW OF SNMPv1.

INSIDE:
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SURVEY



SELLING A LIFESTYLE

AUDIO OUTFITS ABERCROMBIE & FITCH'S NYC FLAGSHIP STORE.

GAMERS' PARADISE

Immersive AV enters a whole new 'world.'



The Nintendo DS Multiplayer gaming station.

BY DAN FERRISI AND DAVID A. SILVERMAN

In many of the AV installations covered in our pages, the technology is supposed to supplement the experience of a facility, rather than actually *be* the experience. For Nintendo World, which is located at Rockefeller Plaza in New York City, that's definitely not the case. At Nintendo World, the famous brand's first retail store, the AV is up front and in your face. The tech-heavy install was done on a short timeline and had myriad elements to juggle.

"Our goal was to create an environment offering the ultimate gaming experience," said Suzanne Scallon, director trade shows, Nintendo of America, Redmond WA. "Additionally, we wanted a place where we could have events, and we needed integrated technology that allowed mass amounts of flexibility." The answer, for Nintendo, was Edison NJ-based McCann Systems LLC. Our two main points of contact for this story are McCann's Jonathan Shor, director of technology, and Stephen Keppler, account executive.

Role Evolved

McCann's role in the project evolved. According to Shor, "The Phillips Group, TPG [the architecture, planning and design firm contracted by Nintendo] approached McCann Systems to help design. We were hired by them as consultants. Then, Lehr Construction was hired to build the space. Lehr contracted us to build/install the AV."

McCann Systems had to be nimble and efficient just to ensure the project

Dan Ferrisi is Sound & Communications' Assistant Editor; David A. Silverman is Editor.

was completed on time. “The whole construction process was very fast-moving. With the timelines, everybody was working on top of each other. Nintendo put forth a tough deadline,” stated Shor. It was six to eight weeks build time on the space. To get the facility done in that timeframe, McCann’s project manager Nick Fazio was invaluable; Ben Herbert was lead technician.

An AV-intensive project in a short timeframe might intimidate some firms, but McCann’s confidence, right from the start, helped secure the job. Keppler noted that Nintendo was impressed by the enthusiasm with which McCann approached the challenge. He commented, “When we sat down with Nintendo to do the consulting and design, they saw that the passion we had matched the passion they had. It was a good marriage in that way. They appreciated the fact that we were excited about doing something custom.” Indeed, there was nothing “cookie-cutter” about this project; there’s no comparable facility from which to copy!

Two Elements Stand Out

Amid all the shimmering AV to behold, two elements of the facility stand out, one of which is the Video Tower, which encompasses nine rear-projection video screens. To describe it is difficult, because it looks like something an avid Nintendo gamer would dream up. The screens are arranged three-by-three-by-three, rising from the first floor to the second floor. Each “level” has three screens encircling the center.

The concept for the Video Tower came from Nintendo and TPG Architecture, with McCann Systems being charged with realizing the vision. According to Shor, “We had this thing in mind but we needed to figure out how to make it work with projection. One of the unique features is that we can cross light. With those projectors, the light paths actually are crossing.”

Projectors for the Video Tower are three-chip DLPs, chosen for their excellent color reproduction. According to Shor, McCann needed projectors

that would fit in the tower’s vertices. “It had to be three-chip DLP and bright, but with a small chassis with a center-throw lens. McCann chose the Digital Projection Mercury 5000gv, which met all design criteria.” The Video Tower screens use Blue Ocean material, which McCann selected and offers high gain with great image pop. “It’s a cast acrylic, so you could create any type of shape. And, the screens have an anti-reflective coating on the back to relieve bounce-back,” explained Shor.

The projection layer is sandwiched between two pieces of clear acrylic, which protect it from damage due to handling. This is a great feature for a facility that receives so much foot traffic. If it gets scratched, someone can just buff it out.

Video Globe Challenge

Although there’s no question that the Video Tower was one of the project’s biggest undertakings, there were other concepts McCann had to realize. Commented Shor, “The Video Globe was another challenge. They wanted a globe, because they’d seen one at the Seattle Science Fiction

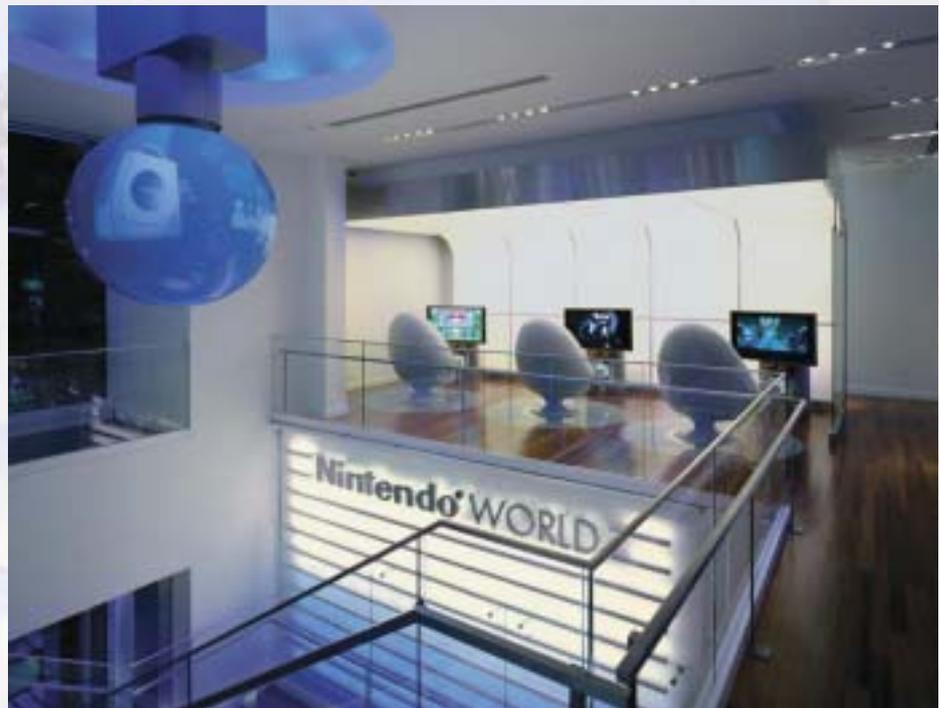
Museum. We went to Washington state [location of Nintendo’s headquarters] to look at what they were talking about.”

After checking it out, McCann Systems abandoned the idea of finding a turnkey system, and instead planned a custom solution. While calling acrylic manufacturers to find out if they could make what was requested, they discovered Global Imagination, a company that makes video globes.

The globe is comprised of three key elements: acrylic globe, custom lens and geometry correction software. According to Shor, “The four-foot-diameter globe requires two acrylic hemispheres to be produced. They are coated on the inside with a projection surface. Finally, they are bonded to create a sphere. A custom lens is then fitted inside the globe.”

The globe, which was sent by Global Imagination to Stewart Filmscreen to be coated, employs a special lens mounted in front of the standard projector lens. It actually consists of many different lenses in one, said Shor. “It goes into the globe, and it’s amazing because the lens might stop at a certain point, but it shoots light back into

The second floor incorporates three interactive gaming stations and the world’s largest projection globe.

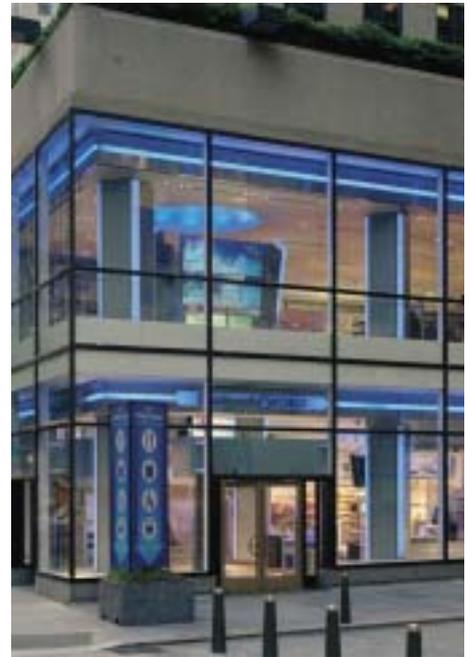


McCann Systems LLC

McCann Systems LLC was founded by Frank McCann in 1996 as an audiovisual design-build company. For 10 years, McCann Systems has delivered audiovisual communication solutions for companies the world over. As a leading audiovisual design integration specialist, McCann Systems offers strong technical expertise, complemented by high levels of creativity and precision. The firm, which employs 35, recently opened a new 21,000-square-foot facility in Edison NJ.

McCann environments can be found in almost every major industry, such as advertising, broadcast, education, entertainment, finance, government, hospitality venues, insurance and transportation. Projects include Medco Health, Client Solution Center, in Franklin Lakes NJ; Empire BlueCross BlueShield, in Brooklyn NY; JP Morgan Chase Manhattan Bank Command Center; and Boston University Visitors' Center, in Boston MA.

For more information, go to www.mccannsystems.com.



Nintendo's first retail store, Nintendo World, is located in New York City's venerable Rockefeller Plaza.

the globe in order to fill it. It produces light in the entire globe, and then they use software that knows the image geometry distortion the lens produces, and corrects for that.”

Other AV Elements

There are plenty of other audiovisual elements included in Nintendo World, as well. LCD screens are omnipresent. McCann employed Sharp true hi-def, 1080p LCDs, which play a range of material. On the second floor is one of the most popular attractions at the facility: the Surround Sound Chairs. There, aficionados young and old can play their favorite Nintendo games on 45-inch LCDs while enveloped in the experience via immersive, egg-shaped chairs, which swirl the audio around the gamer.

Commented Shor, “The chairs are actually off-the-shelf. We just got them with really upgraded speakers, a rumbler and in the back we have a whole crossover to bring the audio in.” When seated in one of the chairs, all one can hear is the sound of the video game; environmental noise effectively is blocked out. Conversely, those standing near the chairs can't hear the video game audio, which ensures the

EQUIPMENT

AUDIO

- 2 Clear One PSR1212 mic mixers w/echo cancellation
- 3 Crown CTS8200 8-channel 3RU modular power amps
- 4 Electro-Voice S-40B compact monitor speakers
- 3 Elixia Chair custom surround-sound chairs
- 12 JBL CONTROL 19CST in-ceiling subwoofers
- 24 JBL CONTROL 26CT 6" ceiling-mount speakers
- 3 Rane AC 22B active crossovers
- 4 TOA Password-HL UHF wireless mic systems
- 1 TOA WD-4800 diversity antenna distributor (4 WT-4800) w/2 remote antennas
- 1 Wohler AMP1A-4S rackmount speaker monitor w/4 stereo inputs

VIDEO

- 3 Blue Ocean 1004323HC 100" Blue Ocean Single Coated 23 custom-cast acrylic rear-projection surface
- 3 Blue Ocean 704323HC 70" 4:3 Blue Ocean Screen High Single Coated 23 custom-cast acrylic rear-projection surface
- 1 Blue Ocean 7291623M72" 16.9 Screen 1.0 Gain custom-cast acrylic rear-projection surface
- 3 Blue Ocean 844323HC 84" single-coated 23 custom-cast acrylic rear-projection surface
- Chief custom mounts for monitors
- 1 Christie 38-VIV306-02 LX50 LCD projector w/standard lens
- 1 Da-Lite 84348BL 120" diag tensioned screen w/LVC-backbox only
- 1 Da-Lite 84348F 120" diag tensioned screen w/LVC-fabric only
- 10 Digital Projection Mercury 5000GV 4500 Lumen 1024x768 3-chip DLP projectors w/3 0.8:1 lenses, 6 1.2:1 001-735 fixed lenses, 1 1.5-1.8:1 001-736 zoom lens
- 1 Electrokinetics Sphere Lift 0340.C projection sphere lift
- 1 Electrokinetics PRL-001-12 projector lift
- 1 Global Imaginations Magic Planet 4" sphere w/remote control, software, lens, chassis
- 3 NEC 61" model 61XM3 plasmas w/custom brackets
- 1 Polycom NT4 network termination device 512k
- 1 Polycom Quad BRI interface for VSX7000 codec
- 1 Polycom VSX7000 codec w/camera VTC system
- 26 Sharp 26" LC26GD4U LCD monitors*
- 12 Sharp 45" LC45D4U LCD monitors*
- 18 Sharp 32" LC32GA5U LCD monitors*
- 16 Show Sage Watchout V2.x full license keys
- 19 Show Sage Watch* Rack display computer for Watchout use
- 3 Sony SNC RZ30N network color cams IP TZ
- 1 TASCAM DV-D6500 DVD player w/RS232 control

ROUTING/DISTRIBUTION

- 1 Analog Way Smart Scaler video to hi-res scaler switcher
- 1 Autopatch 046309R 20x32 VGA 20x8 stereo audio switcher
- 4 AutoPatch 1247320 modula stereo audio output boards
- 2 AutoPatch 1250997 modula series 4, RGBhv input board, HD-15
- 2 Avocent A1000R-AM 16-port KVM switches w/IP control (1 remote user)
- 1 Avocent AVRIQ-PS2 PS/2 interface
- 2 Extron RGB 468xi 4-gang interfaces
- 1 Linksys SRW2024 24-port 10/100/1000 managed switch
- 11 Magenta 4003212-01-Audio Multiview UTX universal transmitters
- 17 Magenta 4003212-01-Serial Multiview UTX universal transmitters
- 28 Magenta Multiview AK 500 receivers
- 1 Magenta Multiview AK500 RS232 receiver
- 4 Magenta Multiview UTX IR universal transmitters
- 1 Magenta Multiview UTX RS232 transmitter
- 4 Magenta MV450IR receivers

CONTROL

- 8 Crestron C2COM-3 3-port RS232/422/485 cards
- 1 Crestron C2ENET-2 dual-port WAN LAN 10/100 Base T Ethernet card
- 2 Crestron C2IR-8 8-port IR/serial output cards
- 1 Crestron CNXRY-8 CNX 8 relay card
- 1 Crestron RACK2 dual-bus control system
- 1 Crestron TPS-4500LB rackmount Isys 12" LCD touchpanel
- 1 Middle Atlantic RM-KB-LCD15 rackmount keyboard, LCD monitor

MISC.

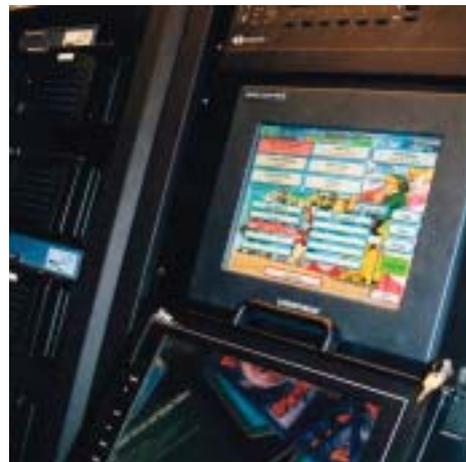
- Liberty Wire & Cable skew-free Cat5 cables
- 4 Middle Atlantic WRK-44-27 44-space gangable racks w/accessories

*Supplied by venue

List is edited from information supplied by McCann Systems LLC.

PROJECT CREDITS

Nick Fazio: project manager
Kin Huie: programmer
Ben Herbert: lead technician
Jonathan Shor: designer
Stephen B. Keppler: account executive



ambience of the environment isn't disturbed. This section is so popular that, on the weekends and holidays, often there is a long, winding line of gamers eagerly waiting for a chance to play.

McCann often uses WATCHOUT software, by Dataton, as they did in this instance. Essentially, the software enables computers to be video servers. A PC-driven application, it lives on multiple PCs and plays back any type of PC content. Explained Shor, "It allows you to string content together and keeps all the PCs playing back synchronized. They're all on a private network. The way it works is you create different clusters."

The Video Tower is one cluster, comprised of three PCs. All three images across the top are the same, all three across the middle are the same and all three across the bottom are the same. Originally, it was going to be one PC per display. Then it was decided that different images across the top really weren't required, so McCann ended up using a large-format switcher; a single PC now feeds three displays.

Creates Timelines

Within each cluster, the software permits programmers to create timelines. These enable the playback of

Second-story view of the Video Tower video projection system.



any Windows PC video content, including such common file types as MPEG and AVI.

The software works via a production PC, which is where the timeline is created. Once the timeline has been created, it goes online and the content is pushed out into the PCs. The Video Tower, just as one example, has three different PCs driving it (one for each tier). If a clip only has to be playing back on the middle level, it's only going to load onto that specific PC. Only the content that's required on a PC gets loaded onto it. So, if there are 20 PCs, but a clip only shows up on one, it's only going to go there.

A control system runs the whole store, with a touchpanel in the equipment rack controlling the facility's complete AV system. McCann Systems' Crestron programmer Kin Huie developed a custom macro to trigger different shows and get feedback. The custom graphical interface really shows off Nintendo's games and graphics. According to Shor, "They could have four different tower shows and then from the control system load any show they want, and then get the response back that it's online and ready to go."

It can load the content into the store remotely from anywhere on the globe; that is, one can create new shows, load them and trigger the control system remotely, if one wants. Shor explained, "From their headquarters, they load their clips into the production PC. They go remotely into it via soft KVM. And then they go online. They actually have a PC with the software, so they can do test shows out there. Then, once they create the show, they can bring it into this production PC and go online."

Webcams for Monitoring

McCann Systems installed webcams in the ceiling, so Nintendo officials in Washington state can monitor the location; they can see that the video actually is playing in the store and can control operations remotely. Said Shor, "A lot of the new content comes out from Washington, so local store personnel don't really have to worry

LCD screens are pervasive throughout this installation.



about loading shows and bringing in new content. One of the key aspects of the software was being able to change content on the fly, bring in new clips and such. It worked out really well.”

Rather than running RGB everywhere, McCann ended up running a skew-free Cat5 cable from McCann’s vendor Liberty Wire & Cable. Shor commented, “We used all Magenta products to go with the RGB over Cat5, and we got the special skew-free

cable that makes it better. The installation was all union-based, and union guys have a lot easier time crimping on an RJ45 than they do with a five-wire connection.”

In the end, it actually worked out to be slightly less expensive, when one considers all the cable runs, all the connectors, then going into the Cat5 solution and working it that way. McCann didn’t do fiber because the runs really aren’t that long, with the maximum to about 150 feet.

A fairly broad range of gear is employed in this one-of-a-kind install. A PSR1212 is used for microphone mixing and volume control. McCann used KVM switchers to manage all the computers. There are a few wallbox-type inputs, which can be routed to the different displays. These help for live demonstrations.

Audio, Too

Although this install weighs heavily on the “V” side of the AV name, there

is some “A” to mention, too. The audio system at Nintendo World is running off its own cluster. There’s a PC dedicated solely to store audio, so that has its own timeline. Because the software can play back any type of PC format, it can handle WAV files and any other audio file type. The store has six distinct audio zones.

Although the audio system is a flush in-ceiling system, McCann did use separate Control 19CST in-ceiling subwoofers and Control 26CT six-inch in-ceiling speakers to deliver more of a full-range sound for when the store cranks up the audio. Typically, the audio is in the background, but there are times, such as for parties and special events, when things are turned up. Using those subwoofers allowed the system to be more full-range. The facility also features Password-HL UHF wireless microphones, which enable the ceiling system to be employed for speech reinforcement.



Ceiling-mounted webcams allow for remote monitoring.

‘Definitely a Challenge’

Make no mistake; this install was a unique undertaking. According to Nintendo’s Scallon, “It was definitely a challenge. We were working under very tight time constraints as well as

the fact that Rockefeller Plaza is very particular with regard to what you can and cannot do.” The building is in an area of New York City with tough landmark restrictions. Exterior signage was strictly regulated, so there is no flashy projection. In large measure, Nintendo World relies on its glass walls to give passers-by a glimpse of the wondrous technology inside.

A strong working relationship between Nintendo and McCann contributed to overcoming difficulties, both technological and logistical. “I thought [McCann] was very easy to work with. They understood the needs and they listened to the client. They added value by providing solutions and suggestions for alternative ways of achieving our goals,” said Scallon.

Mutual Respect

The respect is mutual. McCann Systems’ Shor said, “Nintendo, as a company, was one of our best clients, in

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that the person we were dealing with most at Nintendo actually made decisions. You presented three options for something, and [Suzanne Scallon] would say, 'OK, let's go with that one.' It was really great to work with a client like that. They gave her responsibility for the store and entrusted her with the decisions. Quite obviously, she made the right ones."

Everybody, including visitors crowding the facility, seems pleased with the final results. Commented Scallon, "We got everything we hoped for with the facility." And McCann Systems clearly is proud of the project on which it worked so diligently. According to Shor, "This is a great example of what we can do in a real custom environment. That's one of McCann Systems' niches. A place like this is where we can put our best foot forward and deliver innovative custom solutions. This is a great showcase for us." ■

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