

MEDIA CENTER
INTEGRATOR
ALLIANCE



Windows Media Center

for custom home integrators

Zoetica

Chicago, Illinois

3G Applied Technologies

Installation Case Study



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INTEGRATOR
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Table of Content

Overview	4
Customer Requirements	5
Design Considerations	8
Schematics and Diagrams	10
Installation	12
Support	12
Equipment List	14
Project Schedule & Cost	15
Photography	16

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Overview

Zoetica, a Chicago-based wellness center and a retrofit project, fully devoted to sustainability and personalized customer experience. Using Microsoft Windows Media Center as the core of Zoetica's entertainment and automation system, solutions provider 3G Applied Technologies is providing a cutting-edge environment that will react to every client's presence and preferences automatically. Rick Simpson of 3G has led the still-evolving project since 2006.



Dr. Lilly Ostojich, Zoetica's owner, uses her HP TouchSmart as a portal to run her business. Everything from email and internet to checking up on employees and patients is right at her fingertips.

Customer Requirements

Can you give a brief overview of the customer?

Zoetica is a Chicago-based business that promotes itself as the first personalized wellness center in the United States. It combines a focus on health and well-being with beauty and luxury; the name is derived from the Greek "zoetic," which means wellness or health and well-being. Zoetica is the branch of Lillian Ostojich, M.D., a native of Yugoslavia who received a Doctor of Medicine degree from University of Belgrade in 1982.

Dr. Lilly views sustainability and personalization as core tenets of her business and her services. Her mission is to provide her clients and, by extension, the general public and the planet with the environment, tools, education and support necessary to achieve and maintain radiant health and well-being; she seeks to establish a model for sustainable and healthy living. The facility itself is the central representation of this mission. As a result, Zoetica is a USGBC/LEED Project, with the goal of being awarded Gold or Platinum LEED Certification. Achievement of this certification is unusually daunting because the Zoetica site is a retrofit, not new construction; Zoetica must retrofit, remodel and improve the existing systems. However, Dr. Lilly is fully committed to the process, no matter the cost. Zoetica is the first USDA Certified Organic wellness and health facility in the United States, which means that all of its textiles, skin and hygiene products, produce and food are USDA/Certified Organic.

What type of home entertainment system did they have previously?

An A/V installation company had rewired the site based on specs provided by Zoetica's contractor. However, 3G discerned Dr. Lilly's vision for the project and quickly realized that the existing prewire was not suitable. "The previous company was an installation sales company," says Simpson. "We're not an installation firm or an A/V integrator or an IT integrator; we're a solutions-driven company. We're a solutions integrator. We were the better fit for this project." 3G tore out the existing wire and installed mostly Cat-5.

Dr. Lilly had already purchased a NuVo Technology Essential multi-room audio system. Simpson will eventually swap the original system for an Essentia EEG system, the first multi-room audio system to earn the ENERGY STAR rating, in line with Dr. Lilly's desire for Zoetica to be as green and sustainable as possible.

"I'd never really done a 'green' project before," says Simpson. "These were uncharted waters for me. I was excited to see just what I could cook up for Dr. Lilly."

Were they aware of Windows Media Center before the installation?

No. Interestingly, Windows Media Center entered the Zoetica equation as a digital signage solution. "Dr. Lilly wanted to achieve one LEED point by communicating or educating her clientele about green and sustainability," says Simpson. She wanted a digital signage platform, but frowned at the initial price. Simpson suggested Windows Media Center as a low-cost but highly effective alternative for digital signage. "I told her we could create high-resolution and even high-definition content with her messages, and display them to multiple screens using Extenders. She agreed, and she was excited that the solution saved her thousands of dollars."

Simpson further interested Dr. Lilly in Windows Media Center when he told her that it could be the sole source of music for the entire center. "She was especially excited about this because, with Media Center, she could keep the music 'green,' moving bits instead of atoms, by taking all of your media and digitizing it." After learning of what it meant to go green, we used every aspect that we could think of to make the case for technology being a green enabler. We felt that the more PVC and plastics we could get rid of using technology, the more eco-friendly she would be! So, we came up with a "move bits, not atoms approach" tag line. She caught on to it pretty good, so that has been our mantra with her ever since. In this instance, bits equal digitized content and atoms equal physical content, usually made of plastics (CD's DVD's etc.) The Media Center made this approach possible.

What were the top two or three must have requirements?

Dr. Lilly wanted the solution to be as "green" as possible, paperless, cashless, and automated.

Dr. Lilly wanted the solution to be "high-tech without being overbearing." Dr. Lilly knew that adding technology was a must. "We can accomplish something that's clean and pure while implementing the highest technology available, because I believe that is the goal of the future. It's the only way if we want to be efficient as possible."

The technology had to fulfill the following requirements:

- Handle all the center's digital media needs while maintaining a reliable level of service for its exclusive clientele.
- Stay in line with the green and sustainable vision of the wellness center
- Provide a pleasant and customized experience for each visitor

What control requirements did they have?

Lifelivare, running on the Windows Media Center platform, will be the driver for all automation. Eventually, the system will employ RFID to automatically generate payments for services rendered, on their personal preferences, as well as automatically generate payments for services rendered, eliminating the need for any type of paper transaction. The RFID tags will be able to track the client as far away as across the street, ensuring their room will be ready and employees are alerted of their arrival prior to the client walking in the door. Triggered by RFID, Lifelivare will set climate, lights and music to create the right mood and environment in each room based on each customer's preferences. In addition, the RFID system will track employee's work hours and movements throughout the center. Dr. Lilly required that Zoeteca have the ability to instantly send and view client records, lab results and information from one office to the other, as well as be able to video conference and communicate with other doctors across the world. Skype, a telecommunications tool can be enabled through a media center plugin, thus allowing staff throughout the three floor facility to communicate seamlessly. For this project, the installer used MCEPhone for Skype which can be found here: <http://www.scandix.com/mcephone/>.

What entertainment requirements did they have?

Personalized background music in each of the 14 treatment rooms and throughout the center, is the primary entertainment requirement as well as digital signage communicating menus, services and treatments to customers. One of the top requirements included the need for uninterrupted service in the music throughout the center.

Currently, the Media Center plays the playlist Zoeteca has set up in the system by default. When a customer enters a treatment room, he or she can disable the default playlist by docking their iPod and listen to their music of choice through the iPod dock.

Through the Lifelivare system, music is centrally stored and controlled in each room through in-wall Nuvia Control Pads.

How do they consume and purchase media? (e.g. TV, music, photos, videos, movies, etc)

Simpson says that in terms of content, he's never had a project like this one. Dr. Lilly views Zoeteca as a place where the outside world cannot intrude, a place of total relaxation, and demands near-total control of Zoeteca's environment, including entertainment. Per Dr. Lilly's requirements, there is to be no outside television, radio or movies; all video content will be produced by Zoeteca, audio content is customer-generated through iPod docks in each room and, in the future, customer audio content favorites will be compiled via personalized accounts and stored and delivered through Lifelivare, Windows Media Center and the Nuvia multi-room audio system. If the customer does not have an iPod, then the room defaults to the Media Center's selection. The iPod is activated via Senance AL2 auto-sensing switch when docked by the client.

"There is some video to come that is being shot by her publicist that we intend to show on one of the monitors as part of the digital signage solution," says Simpson. "We will be looping video in the juice bar area, for example, that would feature Dr. Lilly explaining various things."

In addition to the iPod docks, Zoeteca has their own mix of relaxing music being distributed throughout the building, stored on the Windows Media Center

Design Considerations

Where is the project?

Zoetica is based in downtown Chicago. It sits at the base of a 15-story building, taking up the first three floors.

Was this a retrofit or a new construction and how did that impact the design and implementation?

"This was a total gut job, a full renovation," says Simpson. As stated earlier, 3G replaced all of the wiring the previous firm had installed. "They were wiring for a Sonance application, 18-gauge speaker wire everywhere," says Simpson. "We tried to use what they had installed. We did a two-day exercise but in the end we couldn't salvage anything based on the application requirements." 3G subsequently installed Cat-5 cabling.

They also had to wire for the most energy efficient system possible which meant prepping for an ENERGY STAR rated distributed audio system as well as a Lutron Homeworks lighting control system. Due to the unique green aspects of the install, Dr. Lilly required that all lighting be LED and therefore had to be matched with a system that could handle control and management of such lights.

What is the size of the project?

Zoetica takes up 3,000 square feet across 3 floors of a commercial building.

How many rooms are in the project?

Zoetica's three floors feature a main reception area, 14 treatment rooms, a lounge, a juice bar, a manicure area, a pedicure area and a detox room.

How many distributed audio/video zones are in the project?

Zoetica has 18 audio zones. Simpson has employed an interesting twist to make sure that an entire floor does not lose audio in the case that one of the three Nivo Essentia systems goes down. Instead of installing one Essentia system per floor, Simpson has staggered the zones each serves across multiple floors. So, for example, Essentia Number 1 will have a presence on all three floors. "I got this idea from my time in the telecom world, where you always engineer for redundancy and uninterrupted service," says Simpson.

How were the technical complexities of the installation made transparent to the customer?

Simpson has done everything he could to shield Zoetica employees and customers from technical complexities. He has centralized as much as possible via Media Center and he has also outsourced servers and storage as hosted solutions. The result is a visually and functionally clean solution in which much of the troubleshooting can be done remotely or off-site. "This was another example of enabling Dr. Lilly's green approach," says Simpson. "Originally, I had plans to install servers and NAS devices on-site, but I never even presented that idea to her when I got a sense of her approach. She's not in the business of running an IT operation." Dr. Lilly owns the Media Center, but her CRM platform and other storage devices are hosted off site. Her employees only run thin clients of the CRM on tablet PCs. The Media Center is managed remotely by 3G Apps; this includes playlists, digital signage content, and troubleshooting.

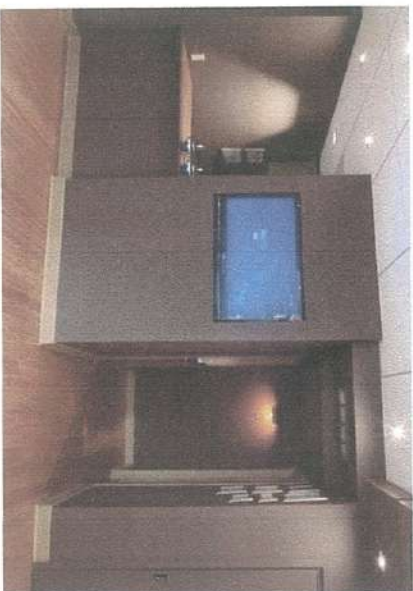
What were the unique considerations related to Windows Media Center?

Simpson says the most difficult aspect of the project with regards to Windows Media Center was optimizing it for multitasking. "How do I make it do all of these jobs I want it to do and still be effective? How well can I use it to provide digital signage, play music and run UltraViolet without hogging all of its resources?"

The installation is using a total of 3 Media Center machines and 1 Linksys DMA2100 extender. The primary Media Center serves up the music for the entire facility as well as furnishes the peaceful slideshow for the lounge area. The second Media Center plays host to the digital signage content but streams it to the main lobby display through an extender. The 3rd Media Center also shares that same content and serves as a backup and a test bed for new digital signage to be displayed. This machine is where all content is choreographed and tried for look and feel.

What were the top 3 design challenges with this installation?

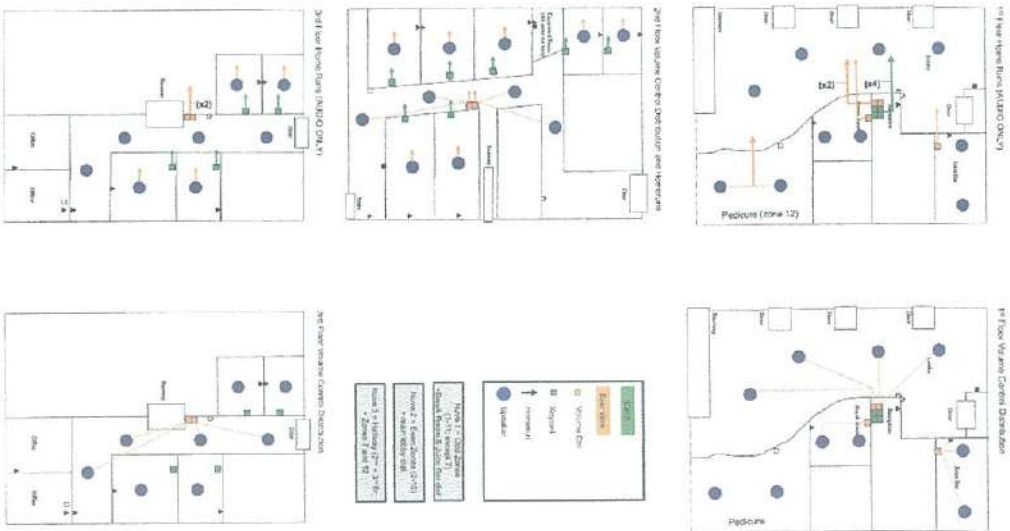
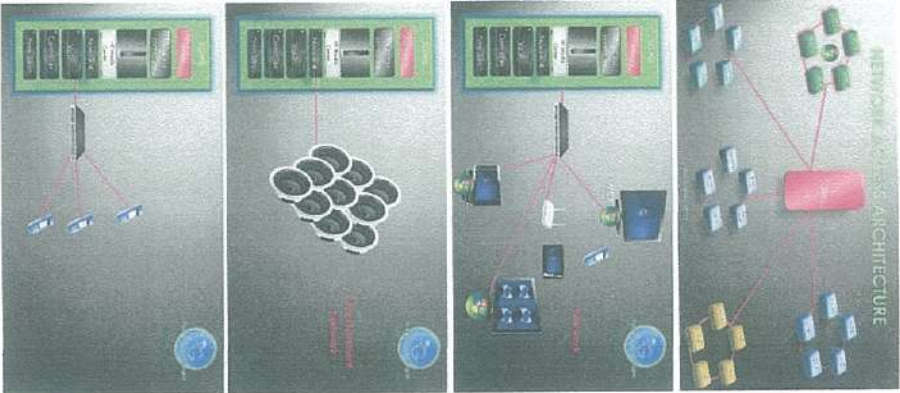
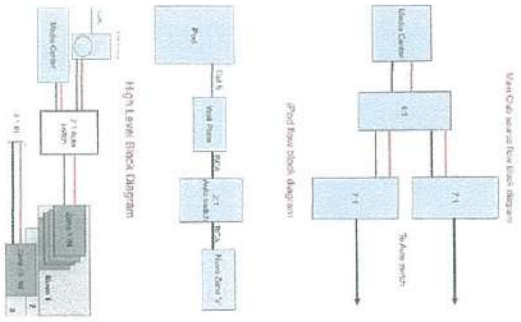
1. The first was adapting and responding to the very unique customer requirements presented at the beginning of the project. Though well-versed in commercial applications, 3G Apps had to use some truly out of the box thinking for certain aspects of the "green, paperless, simplistic" asks when it came to the technology implemented.
2. The second is Simpson's personal goal: to create a single Cat-5 infrastructure to serve all applications.
3. The third, says Simpson, has been "learning what this green/sustainability movement is all about—learning how to do it, and what the purpose is. It took me close to a year to understand it. Now I am on a LEED Accredited Professional certification path. It took a lot of time and a lot of man-hours."



Juice Raw Bar

At the juice bar, clients can order one of Zoetica's special blends, while the plasma serves as a digital signage display for the different products and offerings at the spa.

Schematics and Diagrams



Installation

What were the top 3 integration challenges with this installation?

1. The top challenge for Simpson was to discern how to deliver a paperless, cashless, automated environment by seamlessly tying together Windows Media Center, LifeQwara, HFD and LEED Platinum.
2. The second challenge was designing the multi-room audio system so that it would automatically switch from the Windows Media Center as a default primary source to a locally docked iPod as the primary source in each room.
3. The third was creating a stable solution that met the requirements of the owner and was fail safe. At the end of the day, Zoetica is a business. Time down is money lost. Simpson strived to create a system where if one of the systems were to experience a problem, it would not interfere with Dr. Lilly's ability to run her business.

How long did it take to complete this installation?

The physical installation, says Simpson, took three days—that is, installing the pre-wiring and equipment. The integration, however, is ongoing. Simpson has been working on this evolving project for the past three years and will continue to service and integrate new technologies for years to come.

How did Windows Media Center make installation easier?

Windows Media Center will eventually be the driver of all content, from Cat-5 to the head end. "You won't have to think about getting audio from this source or that source, make sure it's playing or not, no IR issues," says Simpson. "Because it is a networked component, Windows Media Center makes everything easier. If there's a problem, I dial in, reset it, and we're good. I know what it takes to stabilize Windows Media Center. We control what information it's going out to get. We make sure that the primary Media Center does not behave like a PC. It does not access the internet for any reason other than to get album art for a newly loaded CD. It does not try to download anything automatically, not even the TV guide listings. It is not even looking for updates."

What were some of the challenges of working with Windows Media Center?

There were no challenges in working with Windows Media Center in this installation," says Simpson. "I'm very familiar with the dos and don'ts at this point." Simpson has been installing Media Center for years. It is his belief that there is no equivalent to what Media Center can do. His complete understanding of the system makes his installs relatively flawless.

What recommendations does the integrator have for other integrators using Windows Media Center?

Simpson encourages installers to follow this rule: "Windows Media Center in our projects is never sold or used as a computer, it's a digital content server."

Support

Did the customer have any specific support requirements?

"Dr. Lilly's basic requirement is that if it's broke, Zoetica calls me and we fix it," says Simpson. "With Media Center, we can try to fix things remotely, or on weekends, without having to roll a truck to the site."

What specific support challenges of this installation?

So far, none, says Simpson. "Most of the support problems have come back to user error," he explains. "Every time there has been an issue, we've gone in remotely and fixed it. We can even change content remotely."

How is the system supported to meet requirements and address challenges?

Since 2006, Rick Simpson of 3G was, is and will continue to be a close technology consultant of Zoetica. "Dr. Lilly says, 'You can't rush perfection,'" jokes Simpson.

As much as she loves green and wellness, Dr. Lilly loves technology, says Simpson. "She has lofty, lofty goals, and I'm about helping my clients achieve those lofty goals and dreams, to achieve what they thought wasn't possible. We like to put some thought into the solutions we provide, we think well outside of the box, and we aren't afraid of taking alternative means to achieve our clients' goals."

Simpson's philosophy exemplifies the solution provider ideal of listening to the client's wants, needs, visions and desires and advising them of the possibilities. Simpson views each client as a chance to get creative, and in Dr. Lilly's case, his approach has been a boon for both parties. "For the first month, I just let her talk, talk, talk, without suggesting how I was going to do anything, or what was or wasn't possible. I listened, and then I came back with several solutions that fit the scope of her dream." Dr. Lilly is constantly coming up with new ideas and goals and bounces her ideas off of a receptive Simpson, who takes them and tries to make them reality.

What has the installer learned about supporting Windows Media Center systems?

Simpson is a huge proponent of Windows Media Center and feels he knows the system extremely well. After some initial problems with Media Center systems in 2006, he has figured out how to optimize and lock down the systems he installs and he claims he has never had a Media Center fail.

Simpson believes that the success of a Media Center deployment depends on how well you know the machine. "I can almost predict what it is going to do based on the apps that my client will run. I also do not allow clients to install/uninstall apps on any machine that I sell them. We load, test, integrate, re-test, and optimize all apps before putting into the customer's hands. There is not 1 app out there that my clients run, that is not already running in 3G Labs!" Knowing what errors to look for makes it easier to understand what will make the machine miss a beat, and if it has already been tested in a 3G Apps system, you already have that information, states Simpson.

Simpson also reminds installers of need to understand how to sell ease of use with high functionality! He stresses the importance of proper "Media Center Etiquette", disciplines and best practices. "My clients know that when they are done watching TV through an Extender to push "Stop" instead of just turning off the TV."

Says Simpson, of the most important piece of his success - "I am in "Lock-step" with my Media Center vendor, Okoro Media Systems understands what type of apps 3G will run. OMS understands that 3G rarely deviates from our typical install. OMS discusses with 3G every single machine to be deployed and how it will be used and they engineer it to that spec. OMS is also very much a part of 3G's vision of the "Digital Home" as we bounce ideas back and forth about certain apps all the time."

Equipment List

Project Schedule & Cost

QTY	EQUIPMENT DETAIL	TASK	DAYS	COST
1	HP Media Center	Consulting & Design	180	\$20,000
2	HP TouchSmart Media Center	Installation	7	\$ 2,000
1	UMPC w/Media Center (Motion C5)	Pre-Wire	14	
3	Nuvo Essential	Install	21	
1	Nuvo Simplese	Integration		
14	iPort IM3			
14	Sonance AL-2			
16	Sonance speakers			
1	1:8 audio splitter			
3	4:1 audio splitter			
1	Linksys DMA2100			
2	Toshiba Plasma			
2	One In-ceiling WAP			
1	Panamax 5400			
1	Omnimount Rack			
2	Pearless TV mounts			
1	Skype phone SIPH-101			
1	WaveTrend RX-900 RFID reader			
3	Future parts/Apps			
1	Nuvo Essential E-6G			
1	LifeController			
1	LifeWare			
1	Lutron HomeWorks			
14	Aprilia Thermostats			
1	Charnevison WA000			
1	Everfocus EVD/AD1			
1	Global Cache- GC100			
1	Huawei Layer 3 switch			
25	WaveTrend TG-501 tags			
1	3G Apps RFID client management app			
TOTAL			222	\$48,000

Photography



Waiting Area
The waiting area provides a quiet area for clients to relax, enjoy soft music and view Zoetia's offerings on the Window Media Center interface of the plasma display.



Manicure Stations
In the manicure stations, all illuminated with LED lighting, clients listen to the peaceful music playing through the in-ceiling speakers.



Treatment Rooms
Zoetia clients are treated in one of 14 different treatment rooms, which are all equipped with individual iPod docks so clients can enjoy their own mix of soothing music and personal climate control for ultimate comfort.



Automated Waterfall
This beautiful and serene waterfall is integrated through Windows Media Center and controlled by the automation system, Lifelive.



Head End Rack

As the central hub for Zoetica, the control room hosts all equipment needed for the business.