

Media Wall Madness



Rooney's Top-Five Tips for Building Customer Loyalty

Retaining customers over the years is good business—especially when dealing with high-end clients who spare no expense to build beautiful, integrated homes and media systems, and who move from time to time. Here are a few tips from Tim Rooney, owner of All Around Technology, on retaining clients over the years.

1) Sell them something that they will love. The test of our success in design is whether the system that we install is used more or less as time goes by. If clients love the system, they will use it more. If you put something in that they can work and that they really enjoy, then the system disappears and it is all about the experience. At this point, the client will feel as though the money was worth it, and will be much more likely to buy again.

2) Stay in touch. Stopping by the house or calling out of the blue to check on your clients is key. They always have a question or two and appreciate the attention and the commitment to the relationship. If you stay in touch and on their radar, you are much more likely to be called for subsequent projects or referrals.

3) Don't just finish it, make it shine. Spend time with the system as your customer would—watch a few movies and play a few videogames. You will usually discover some idiosyncrasies that you didn't realize were present. While the system will be tuned by this point, it's perfecting little operational issues that the client will appreciate. We also like the client to give us a few "special requests"—things that they ask for once they see the true capabilities of the system. This puts the shine on the system for the homeowners, and will make them realize that they have something that is truly customized for their tastes.

4) Keep it simple. As designers and installers we have the power to limit the feature set to those that reduce complexity and increase reliability. You lose more than money when you can't get some secondary aspect of the system to operate as expected—you lose credibility.

5) Ask clients to let you show the system to other people. While this goes a long way in demonstrating your product to new clients, it also shows your existing client that you are proud of your work. The vast majority of our clients are not technical. They look for non-technical cues that they got a great system. And if you think the system is good enough to show off, it must be great!

How to retain clients, hang a 500-pound plasma, and install a multiple-media display that is reliable, simple, and sonically and visually impressive.

By Krissy Rushing



The new media system features five independent displays that are "floating" in a black shadowbox lined with rigid fiberglass and acoustically transparent fabric. The idea was that it would be a 'moment' of technology in an otherwise traditional room.

Installing a multiple-display media system—not to be confused with a multimedia system—can be as complicated or as difficult as you make it, and it always helps if you know what you are doing. And Tim Rooney, owner of All Around Technology (AAT) in Rockville, Md., certainly does.

After: The old system was relocated to the exercise room and the interior of the cabinets were reconfigured for the large media system racks. The chairs are on swivels with castors. A full wet bar leads to the powder room.



He and his team designed an integrated home and multi-display media room for Washington, D.C.-area real-estate magnate Herb Miller and family that culminated in AAT winning CEDIA's 2004 Electronic Lifestyles Award for Best Integrated Home Level V.

Fast-forward three years. Miller was downsizing and moving to a smaller residence with his family. The house he purchased had several media rooms, which were, coincidentally, also installed by Rooney and the AAT team for the previous owner. The Millers wanted to retain the gorgeous

millwork and fireplace along the front wall and keep the construction to an absolute minimum. "We found that we could construct a new rear wall that would give us an extra 24" depth to house all the speakers and TVs," says Rooney. "By doing it this way, we were able to reuse the existing wall fabric, which was a custom dye lot now three years old."

The media room that AAT was now hired to remodel had an existing Runco plasma hidden behind a piece of custom artwork that slides to the right for viewing. However, Miller wanted to ►



Middle Atlantic AX-S millwork racks were split horizontally, in order to be accommodated by the existing millwork. Open shelves and pullouts hold video games that tend to 'come and go', with the client's children and their friends. Cool, conditioned air from an adjoining room is moved through both cabinets independently by Cool Cube exhaust fans, which propel the air out through registers in the upstairs Pantry.

duplicate the award-winning five-display media wall in this room, so a media-room remodel was in order.

"Herb really wanted to be able to use the system with the lights on, something he couldn't do in his previous home," says Rooney. "At the time we installed that original system in his old house, flat-panel displays were not being manufactured as small or as large as we needed them to be. We had

to use a projector to get the 107-inch picture and four 32-inch (4:3) CRTs to fit into that space. Now we have more options, and by using all panel displays, Herb can watch with the lights on and has a great, consistent image across all five sets."

In this new design, AAT selected four 32-inch LG 32LB4D LCDs as secondary displays. These were easy to install compared to hanging the main display—a 103-inch Panasonic TH-103PZ600U

Multiple-Display Media Systems Made Easy

While a five-display system in one room can be intimidating to many clients and extremely complicated and costly to set up, it doesn't have to be if you manage client expectations and keep the system unbelievably simple. One way to contain costs and installation complexity is to limit the capability of the secondary screens. In this case, the four small displays only play cable or satellite. You can't play every source on any screen you want. The main display, however, is the jack-of-all-trades. The homeowner can watch anything from VHS to Blu-ray to satellite and CATV or play Playstation 3, Xbox 360, or Wii games. "If you keep operation this straightforward, it is not a big issue from a control perspective," says Rooney. "If you have every source going to every screen, then you get into format and resolution conversion issues, automated patch panels, and other complicated programming issues. The difference to the client could be as much as \$50,000 and entail endless amounts of programming and debugging for the installer." By keeping the system uncomplicated, managing client expectations on what the secondary screens are capable of doing, and carefully considering screen size and seating distance, you can provide a multi-display system to clients that isn't over-the-top expensive or overwhelming, and doesn't require racks and racks of equipment to facilitate features that will likely never be used.



AAT programmed the Crestron touch panel to look like the media wall so that the Millers could operate individual TVs by simply pressing the corresponding button on the touch panel.

plasma—which was an exercise in brute force. (See sidebar "Hanging the 500-Pound Beast.")

Once installed, the displays needed careful calibration. "We were very concerned about matching the color of the plasma to the secondary LCD displays. Fortunately, we have one of the best video calibrators in the country, Jim Doolittle. We flew him in from Boston to work his magic." (See sidebar "The Science and Expertise of Calibration"). ►

Cover Story

Before: A snapshot of the rear wall of the room where the multi-display would eventually go. The acoustically transparent fabric was removed carefully and reinstalled around the shadow box that holds the displays and speakers.



Media room remodel in progress on the rear (entrance) wall. The existing carpet, stretched fabric walls and furniture had to be protected. The ceiling was fair game though, as the lighting needed to be moved out to new locations. A very delicate retrofit.



A production shot showing the steel beams and Chief brackets for the 103" plasma. Also shown are the stand-off mounts that "floated" all the TVs and speakers in the same vertical plane as the plasma. The lower section houses the James subwoofers and center speaker. The yellow material behind is rigid fiberglass, which would later be covered in scrim and then Guilford 701 Black.

Extreme Power Management

In addition to having five displays for watching sports and politics, Miller's requirements for the new media-room were that the system be reliable, extremely simple to operate and sound incredible. To bolster reliability, Rooney and the AAT project team designed the entire system to run on a large MGE Dual Conversion UPS System that gives the Millers approximately two hours of run time

when the power goes out (and a lot more than that if the system is on standby).

"Components, especially cable boxes and satellite receivers, are unpredictable when they lose their power," says Rooney. "We didn't want the homeowner to have to deal with those issues, so we needed constant power, which the MGE system accomplishes."

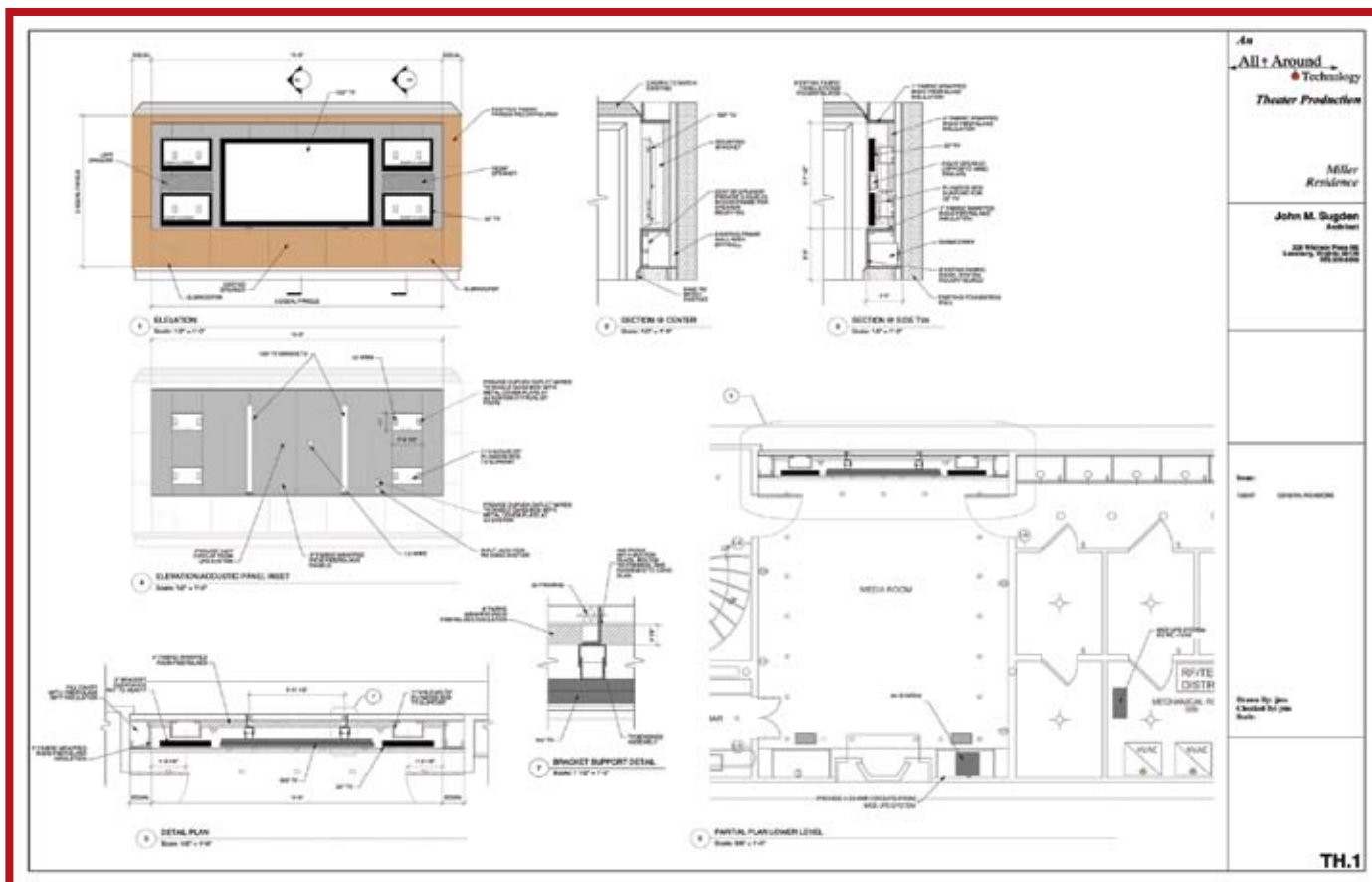
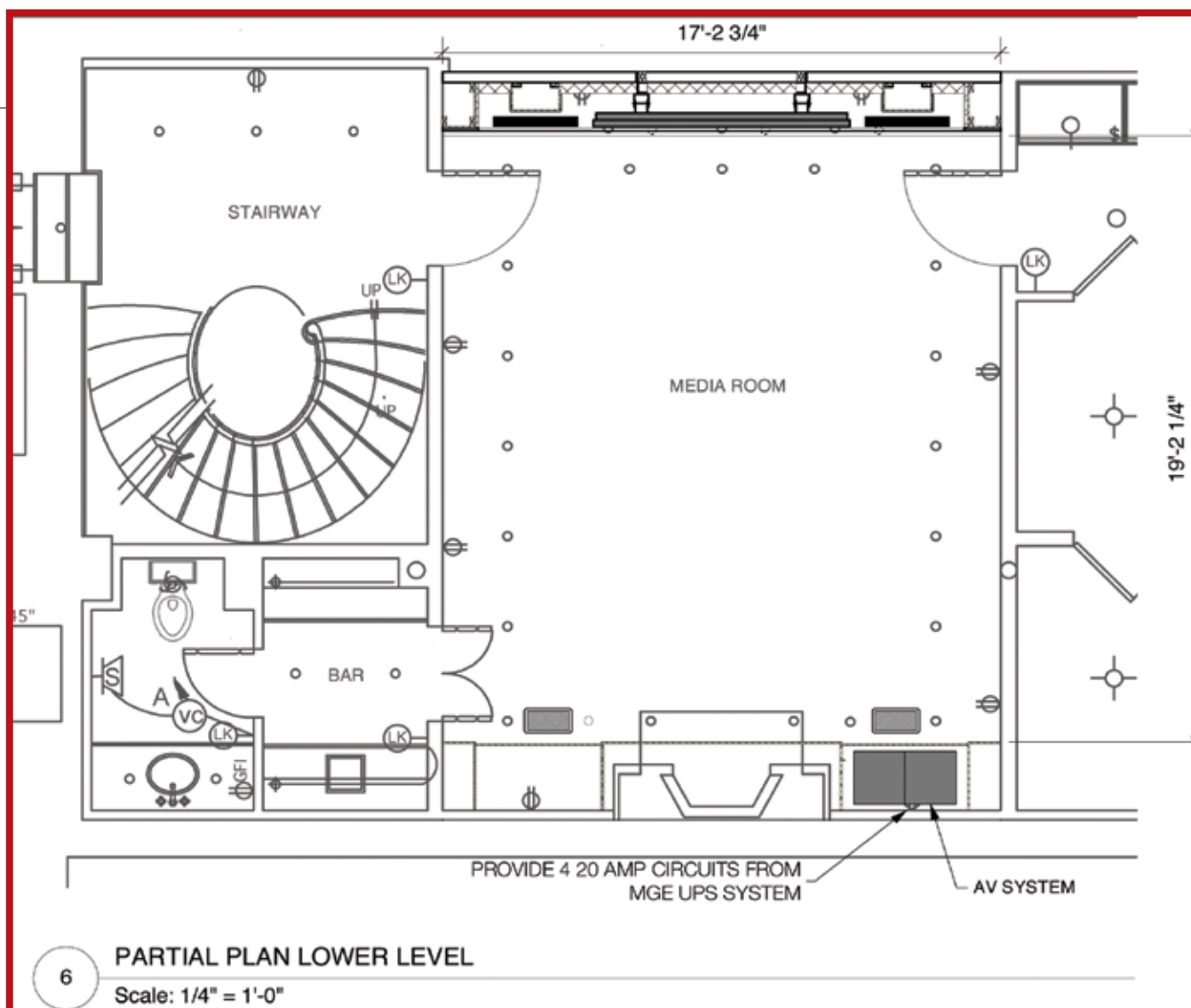
For simplicity's sake, AAT gave the Millers

a Crestron MC-2E control system and Crestron TPMC8X touch panel with a graphic interface that looks very much like the five-display TV wall. If Miller wants to control one of the TVs, he simply presses the corresponding set on the touch panel. Rooney also equipped the Millers with a Universal Remote MX-980 remote to simplify the TV-watching aspect of the system.

"While touch panels offer a lot of functional-

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AAT architect John Sugden conceived the shadow box solution and drew it along with several other options as concept drawings for the Millers. These concept drawings were developed into a detailed construction set once the final design was approved.



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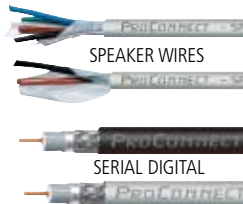
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Hanging the 500-Pound Beast

A 103-inch plasma is 1,000 pounds delivered (in its shipping crate) and doesn't get on a wall by itself. It takes a lot of careful planning to do the job properly. "Panasonic has a very well-thought-out program for getting these plasmas delivered and hung," says Rooney. "They require you to fill out paperwork with things like the size of doorways that the plasma will need to go through, how many steps up or down the TV will need to be carried, and more. Then they deliver the plasma right to the wall on which it will be mounted."

There are two methods of hanging the plasma. One is to follow Panasonic's instructions exactly. "You install two steel hooks above the mounting position in an exact location, and then two guys can carefully winch up the TV to get it on to the pre-hung Chief mounting bracket," says Rooney. The other way, which is the way Rooney and his team did it, is to get 11 guys over to the job site to pick it up and hang it. "We had another job nearby, so we had everyone come by for an hour and help hang the plasma. We weren't exactly sure how it was going to work, but it wasn't that big of a deal," says Rooney.

That's a rather casual attitude for Rooney to take, considering the 5:1 safety ratio for reinforcement of anything hung on a wall. For this 500-pound behemoth, AAT had to reinforce the wall to hold five times that amount—that's 2,500 pounds.

"We built in two large steel angle-iron studs from floor to ceiling that bear on the existing concrete floor and are braced by the floor joists above. The mounting bracket is attached to the studs with bolts," says Rooney.



The mounting crew:
10 to lift and 1 to
take the picture!

Up she goes! Because the 500 lb. TV was recessed in a niche, AAT preferred brute strength rather than a pulley system to mount this behemoth. The steel wall structure was predrilled for service hooks if ever needed.



ity, sometimes clients appreciate having the option of using a simpler remote," says Rooney. For consistency, Rooney used the MX-980 remote in all the home's other media and television systems. That way, if a guest can operate the plasma in their room via the MX-980, they will be able to operate the system in the media room.

Of course, there is much more to making a complex system like this run smoothly, and that is largely due to Rooney's philosophy to keep systems incredibly simple throughout the entire design and installation process. (See sidebar "Multiple-Display Media Systems Made Easy" for details.)



AAT's production manager David Lerew helps to show off the plasma's scale.



A shot showing the two of the four Middle Atlantic AXS racks after they arrived from testing at the AAT facility. The foreground shows the cavity for the former plasma as well as the track used to roll the custom art piece out of the way.



This small ground floor entrance under the front stoop belies the 10' ceiling height throughout the ground floor level. The plasma fit through with less than 2" to spare.

A Sound Choice

For incredible sound, AAT used an Anthem AVM-40 surround sound and Anthem P5 Statement amplifier running James Loudspeakers 83-SDX fronts, 62-SDX rears and two EMB-1200 subwoofers in a 5.2 configuration. "We would have liked to get the side speakers in for 7.2 surround, but the ceiling was full of pipe, and the side wall locations were

unavailable because the installation process would have required new fabric walls," says Rooney.

With the previous owners' system, AAT had installed treatments of stretched fabric over one-inch rigid Fiberglass. Rooney used the same type of material across the front of the new multi-display wall, which worked well to cover the center and subwoofers.



A closer shot of the rack before wire dressing.

"Because we were limiting the scope of our work to the existing conditions, we used a Dolby LP8D8 equalizer that offers phenomenal DSP equalization capability to fine tune the performance," says Rooney. "We had a studio engineer familiar with the Dolby equalizer and software come in and EQ the room for the best sound. The result is stunning."



The client's former media room, showing Runco VX-5000c on Display Devices lift with 107" Stewart motorized screen, flanked retracting 32" Sony CRT televisions. The base cabinets concealed a JBL Synthesis 2 system, which was run from the series of racks at the left. The house-wide AMX automation system was run from there as well.



The existing media system in the Millers' new home was also designed and installed by AAT for the previous owner. With the push of a finger, the custom artwork retracts and slides into the front of the cabinet to the right. Shelf storage in that cabinet remains undisturbed behind the pocketed artwork. The Runco 60" plasma and associated multi-media system was relocated to the Exercise Room.

Exceeding Expectations

With this solutions-oriented approach to meeting client's goals, it's no wonder that Miller used AAT again for this media-room remodel. While this kind of loyalty is sometimes hard to find, it isn't hard to foster, according to Rooney. (See sidebar, "Rooney's Top-Five Tips for Building Customer Loyalty," for details.)

The breathtaking room has a gorgeous back wall with interesting artwork, millwork, and a cozy fireplace that is juxtaposed by a slick high-tech media wall up front. The effect of mixing high-tech with luxurious comfort is never jar-

ring or forced, but rather a kind of natural evolution. Now, the Millers are even more pleased with their second multi-display wall than they were with their first. Miller's son, who is a film buff and film major can now watch Blu-ray movies or DVDs in the room, and Miller can enjoy five different programs, whether sports or politics, on the multi-display wall without feeling intimidated or overwhelmed by the system. In fact, the media room is the most popular room in the house—a sign that Rooney and his team at AAT will surely be around for the Millers' next big move. **CR**



ISF calibrator Jim Doolittle

The Science and Expertise of Calibration

For AAT, video calibration can make or break a multi-display system: it is the difference between a seamless visual entity and an unplanned patchwork of five different television models. Tim Rooney knows from experience that clients often keep an eye on four channels using the secondary screens, and watch the most relevant television program on the main screen. So, the CNN program on the LCD has to match the same CNN program on the plasma perfectly. This is tricky given each screen technology is fundamentally different. Rooney says, "There is no job that ISF calibrator, Jim Doolittle can't handle."

"The main concern was the difference in the primary colors, gamma response and color decoding between LCDs and plasmas," says Doolittle. "The LCD has different gamma, which makes the midrange look brighter. With the Miller project, I started by calibrating the plasma first, which achieved a good result with respect to NTSC and HDTV standards."

Next, Jim Doolittle calibrated the top left LCD to match the plasma. "By manipulating black level and color decoding, I ended up with a reasonable match," he said. Next, he matched those LCD settings and tweaked the response of the bottom left screen to match the LCD above it. He followed this method of matching LCD to plasma on the right side displays as well.

"Once I determined that the LCDs matched each other, I did some minor tweaks to the plasma and the whole system gelled. I have done a few of these systems for AAT over the years and it initially seems impossible that such different technologies could ever match," says Doolittle. "Proper calibration is all about science, but with multi-display systems you need real expertise to throw in a bit of magic as well."