# Time Warner® Medialab

New York, New York

Commercial


Photo courtesy of CompView, April 2012

## Crestron DigitalMedia™ helps Time Warner® Medialab push the limits of market research and AV systems

It's a huge challenge. Today TV, movie and video game producers have to accommodate every conceivable platform from smart phones with tiny 4" touch screens to home theaters producing 10-foot 3D images.

"We recognized how consumers are embracing new technologies, and we needed to better understand this rapidly growing trend," says Martin O'Neill, Time Warner's Executive Director of Business and Research Operations. That realization lead to the development of the company's sophisticated new Medialab, which opened in the Time Warner® headquarters in Manhattan in February.

At the heart of this laboratory are some of the most innovative research tools ever devised – and supporting them one of the nation's most complex and powerful audio video systems, based on a Crestron DigitalMedia™ network and Crestron control. In O'Neill's words, the Medialab is "an imaginarium for audience research."

### Studying how consumers use media

Like other large media companies, Time Warner does a great deal of audience testing to hone its content and the marketing of that content. Medialab can test virtually any product or any idea for the company's nearly 100 subsidiaries, which include Warner Bros. Studios®, HBO® and CNN®, Time® and People® Magazines, and an Interactive Entertainment division that publishes the Batman® and LEGO® series of video games. Medialab also takes on projects for Time Warner's ad agencies and other partners. "We might show movie trailers to a test audience or test consumer reactions to a new website," says O'Neill. "We want to get a sense of how much they like something, what parts of it they pay attention to and how we can improve it."

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"The lab was built from the ground up to be incredibly flexible," adds Steve Woodward, Senior Director of Global Broadcast Technology for Turner Broadcasting, who is in charge of the technical aspects of Medialab. "It had to be because we don't control the research or the research objectives."

The new 9,600 square foot facility includes eight testing labs and two observation rooms. There's an eye-tracking lab, designed to reveal how individual test subjects view a website, movie, TV commercial or app and how they interact with the device carrying it. There's a mock living room, a 47-seat movie theater and a traditional focus group room. There's a usability lab where small groups can interact with video games, video media and electronic devices. And there's a mock retail area where researchers can observe how shoppers view and buy printed media, snacks and other merchandise – and observe the effects of TV commercials seen earlier in another part of the facility.

In each of these spaces, thanks to an extensive closed circuit camera system and a biometric device that measures heart rate, respiration, motion and galvanic skin response, everything a test subject says, does and, to a large degree, feels can be observed, recorded and analyzed.

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**Designing the audio/video systems**

Tom Yerkes, General Manager, Western Region for Beaverton, Oregon-based CompView Audio Visual, says Time Warner began planning Medialab in the fall of 2009. Yerkes had experience with this kind of project, having led the AV system design team for a smaller Warner Bros. facility in Burbank, California.

"We could see that this would be the Warner Bros. lab on steroids," Yerkes says. While Burbank consists of a single usability lab with an observation room and rack room, this would have seven additional research areas, many of them, according to Woodward, "without peer or equal in any of our divisions."

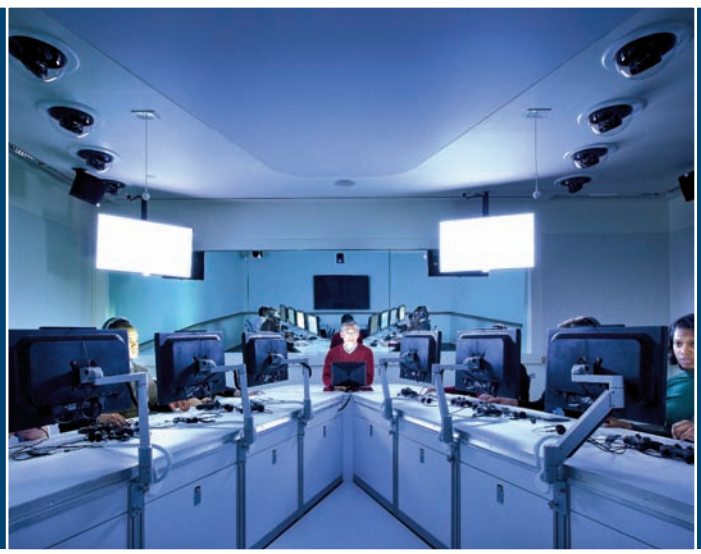
The demands on the video system are enormous. Woodward asked for a switching system that would route any media source to any display plus a multi-window digital recording system, since a high-definition recording would be one of the deliverables for each project.

Inside the labs are a total of seven 22" - 60" 3D-capable Samsung displays, 22 Vaddio HD-19 PTZ cameras, a Tobii eye-tracking camera, 11 Shure and six ceiling mics, and 41 loudspeakers. Inside the theater is a Christie Mirage HD10K-M 3D DLP projector and a 180" Stewart screen, a Crestron PROCISE™ 7.3 surround sound processor, a Crestron PROAMP 7X400 amplifier, nine speakers and two subwoofers, plus two Samsung SCP-2120 infrared-capable PTZ cameras and an audience response system. Observation Room 1 is equipped with 14 Samsung LED displays for camera, media and data viewing as well as a one-way mirror into the Usability Lab. Observation Room 2 has six Samsung LED monitors and a one way mirror into the focus group room. The retail space includes four Vaddio cameras.

Media sources may include virtually any smart phone, tablet, Blu-ray Disc® player, video game console, DVR or computer, and sources change constantly, depending on the research project.

Yerkes says that when they designed the Warner Bros. lab in 2007, it was a challenge just to handle a small number of game consoles, Blu-ray Disc players and digital displays. "We had to wire everything with HDMI® cables and HDMI switchers. We ran into issues with EDID handshake, the redistribution of HDCP® keys, distance limitations and faulty cables," he explains. Crestron had introduced their DigitalMedia™ products by the time CompView began work on Medialab, so Compview design engineer Jeff Kaylor based the new systems on the DM® architecture. "We felt that even the first generation Crestron product was far ahead of what other manufacturers offered," Yerkes explains. "As the product evolved into DigitalMedia 8G™, we updated our designs."

In the end, CompView project manager and field engineer Gustavo Rosta installed a switching system based on five Crestron DM32X32 matrix switchers and three DM8X8 switchers to provide a combined 184 input by 184 output switching matrix. "It allows us to switch any source that we can anticipate to any destination we might ever use," Woodward explains. CompView also used two Crestron control processors to operate the systems, with a Crestron a V15 or V12 touch screen in each of the labs and observation rooms, and a TPMC-8X in the rack room.



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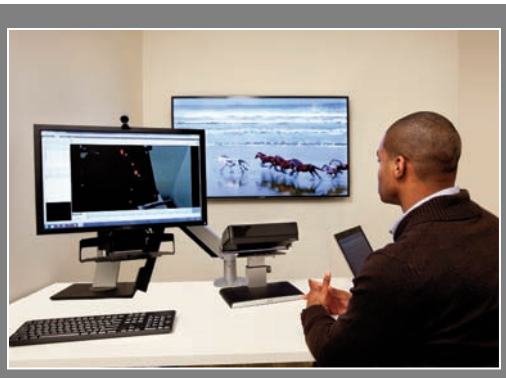

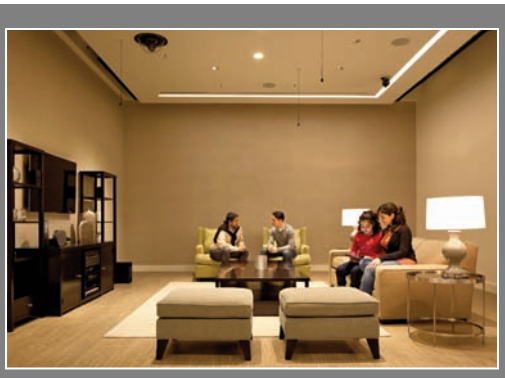

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One of Woodward's goals was to interface any device that might be brought into the Medialab, either today or in the foreseeable future. For example, many smart phones now have mini-HDMI outputs, and staff can connect them to a DigitalMedia transmitter. "Right now our Crestron system is fully compatible with the HDMI 1.4 standard, with 4K video and 3D support," he adds.

To provide the multi-window recording that Medialab required, CompView installed a total of 16 BlackMagic Design H.264 Pro Recorders, which are also connected to the DigitalMedia network. Together they can record the media played on any device, the test subject's interactions with the device, what the test subject says, facial expressions, responses from the audience response system and biometrics, all in sync in real time so that researches can analyze them at a later date.

"The CompView design is highly modular, so that the switching and control is closely related to our main functional areas," he adds. "When the time comes to upgrade the system, we will be able to do so area by area and not have to shut down the entire lab."

Yerkes says that, while the design of the Medialab systems had its challenges, the DigitalMedia 8G system has performed flawlessly. "We built the entire system in our office in Garden Grove, CA, programmed and tested it, then loaded it on a truck and shipped it to New York." While an electrical contractor was wiring Medialab with reliable Crestron DM 8G cable, engineers in California tested the system using whatever Cat5 wire they had on hand. Despite the complexity of the system, "there were no major issues," he reports. "It worked in our office, and it has continued to work on site."

O'Neill says he's excited about the capabilities the lab provides. "The Medialab is an intellectual playground that helps us bring our products to fruition and helps make them compelling for our customers."