



Photo courtesy of TELUS Digital Media Solutions

Reality Chek

Crestron provides the go-to technology for immersive digital shopping experience

How can brick and mortar retailers stand up against online competition?

For FGL Sports®, owners of Sport Chek®, Sport Mart, Athletes World, Nevada Bob's® and other retail brands, the answer is to make the stores more attractive through immersive digital systems as well as an all-star staff and great products.

A visit to their flagship Sport Chek store in Toronto offers shoppers the chance to interact with roughly 140 video screens, many tied into surround sound systems—an experience especially attractive to hard-to-reach younger demographics because it's far beyond anything they'll find online.

- + There's the Adidas® shoe wall, a video wall that uses three 55" interactive touch screens to display product information, live Twitter® feeds, videos and still images designed to help shoppers choose the perfect product and fit for any sport.
- + There's the 12-foot tall 'Nike® Shoe VJ Experience,' which allows shoppers to mix art and sound using palettes by artists James Jean, David Choe and DJ Cut Chemist.
- + There's the 'Innovative Escalator,' a 19-screen video wall triggered by Xbox® Kinect® sensors to synchronize sports scenes, promotions and a simulated chair lift as customers ascend to the second floor.
- + There's a five-foot by 32-foot projection display suspended in the store's front facade showing HD video, still images and live sports feeds to anyone passing by.
- + There's a digital community video board that provides customers with schedules, updates and stats for local amateur sports teams.
- + And beyond that there are a large number of individual smaller screens, from digital tiles built into the walls and tables to Android™ tablets built into clothing racks and clothing tables.



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“The real purpose of the Toronto Sport Chek is to test all of these systems and find out which ones are most appealing to consumers,” says David Carbert, Business Development Manager for TELUS® Business Solutions, which designed and installed the digital video systems in the store. “It’s not only a flagship retail space but a test lab for retail concepts.”

Driving the AV system is a Crestron DigitalMedia™ network based on a 96x96 switching matrix, almost seven kilometers of fiber optic cable and Crestron control. The system allows fast, flexible deployment of new video systems, ensures that no screen will ever go dark in this busy, testing environment, provides full high-definition video at 1080p and is ready for 4K ultra high definition systems as they become more widely available.

“As spectacular as the store is now,” Carbert adds, “it will be changing constantly. The intent is to change the sources and displays as new ideas are ready to be tested, then roll the most successful out across FGL’s entire retail network. The DigitalMedia technology will give Sport Chek the flexibility they need to make that possible.”

Meeting the challenges

Carbert says the TELUS integration group first got involved when FGL came to TELUS Business Solutions asking about digital signage. TELUS is one of Canada’s largest telephone, mobile and Internet providers, but they provide a wide array of services including digital AV integration.

According to Jason Antinori, the TELUS engineer who created the final Sport Chek technology designs, the video systems are actually endpoints for a cloud-based digital signage system. The FGL Sports creative group, based in Calgary, creates video and audio content then uploads it to a server managed by a partnership of TELUS and signage provider Stratacache. From there it is downloaded by Stratacache SPECTRA media players serving the displays.

In the original design, developed in the first few months of 2012 in a collaboration between TELUS and FGL Sports, each SPECTRA player was to be connected to FGL’s virtual private

network but could be scheduled and act independently. That summer multiple third party platforms, including the Nike and Adidas displays, were added. “But then FGL management asked what would happen if one of the third party playlists or their hardware didn’t work properly and whether they would be able to prevent the associated screens from going dark,” Carbert explains. “Our answer was no, we could not prevent dark screens unless we made specific changes to what we had planned in the core system design.”

At that point the design team suggested a matrix switching setup, where video intended for one area of the store would be automatically routed to any other should a media player or its software develop a problem. They also suggested centralizing all of the players and other source equipment, so that if the store needed to service a player or decided on an upgrade, they could do so in the equipment room without shutting down any part of the sales floor.

“The next question was, would that matrix and a Cat6 cable plant handle changes coming to video technology? I said the one thing we knew for certain was that 4K video is coming, and we needed to be ready for that,” Carbert adds. FGL management agreed that all of these changes made sense.



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Antinori says the obvious solution from his perspective was Crestron DigitalMedia technology running on multi-mode fiber optic cable. “As soon as I heard about the changes, I knew it was time to call Crestron,” he explains. Antinori says he had used DigitalMedia on any number of projects and was very confident it would handle the requirements. “I also knew the Crestron engineering team would back me up. I could send them my designs and be confident that they would catch any mistakes I made while we were still in the design phase.”

Antinori ended up designing a 96x96 switching matrix using three Crestron DM 32x32 switchers controlled by Crestron CP3 processors. The switching matrix would carry all video and audio and allow the system to switch any source to any screen anywhere in the store. To tie the media players and all 140 displays into the matrix required roughly seven kilometers of fiber plus an equipment room built in the basement of the store.

Synchronizing 70 media players

Because the Toronto Sport Chek is so busy and so high profile, the owners did not want to wait until someone noticed that a screen had gone dark before switching to another video source. Antinori and the TELUS team worked with the FGL creative team in Calgary to develop a method of automatically switching video.

The solution they decided on involves a failsafe command the creative team programs into each playlist they upload to the signage server. If the video goes down, that command goes out from the affected player to the Crestron processor and triggers the matrix to switch another source to this display. “The playlist is actually sending a series of commands to the Crestron system to control the hardware, turning it on and off, for example, at the start and end of the day,” Antinori explains. If there’s any issue with the media or the playlist itself, it will trigger the system to switch to another video source, then notify the creative team that there’s a problem.

Antinori believes this is the best way to keep the screens online because the Stratacache players are extremely reliable, although the programming might not be. Normally if there’s any issue, the system will switch sources so quickly that customers and staff might not even notice a glitch. “The failsafe to the failsafe is to switch video manually using the Crestron touch screen in the store,” he adds. “We don’t expect that to happen very often.”

The ability of the playlists to trigger the control and switching systems is the basis of one of the most impressive pieces of media in the store. “About every 20 minutes the system plays



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an ‘anthem’ on every display and video wall,” Carbert says. These anthems consist of a series of video images with voice and musical accompaniment, usually mixing the Sport Chek and vendor logos with some seasonal sports theme such as hockey, skiing, running or baseball. An anthem does not play the same video at the same time on every screen or the same audio through every speaker. It’s more of a symphony with different parts of the electronic orchestra making their own contributions to the total effect. “You can think of it, in the simplest terms, as a stadium full of fans creating a ‘wave’ that moves around the store,” Carbert explains. “We’re synchronizing 70 media players and all the displays and sound systems. The possible effects are limited only by the creativity of the design team in Calgary.”

Although Antinori says Crestron DigitalMedia was the first solution he looked at, it was not the only one. “While FPG was willing to invest in the technology they needed, they wanted to be sure they got the best return for their investment,” he says. “We did consider an alternative and we could have made it work—but it would have cost at least double and would not have provided the flexibility that DM® did.”

Carbert says the Crestron team was extremely helpful in meeting the tight construction schedule. Not only did they double check Antinori’s designs, but they also located and consolidated inventory from across North America to make sure TELUS could meet their deadlines.

The new systems have proven impressive and extremely reliable. The technology itself has gained enormous publicity, including stories in the business and advertising trade press plus a video feature on the Discovery Channel®.

“Other retailers are taking notice,” Carbert says. “Where they might have included more digital video in their five year plans, now are they asking themselves if they can do it in two years or less.”