



# TECHNICAL COLUMNS

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## CABLE-TEC EXPO SHOW PICKS

By RON HRANAC

What a difference a year makes. Well, perhaps also location. Mother Nature cooperated quite nicely for SCTE's 2010 Cable-Tec Expo, held for the first time ever in New Orleans in late October. No snow and, thankfully, no hurricane. Despite the still dreadful economy, Expo 2010 managed to bring together more than 8,200 attendees and nearly 400 exhibitors in the Ernest N. Morial Convention Center.

A tip o' the hat to the Cable-Tec Expo Program Committee, headed by Cox Communications' Jay Rolls, and SCTE headquarters staff for a job well-done and yet another superb confab. Tuesday afternoon's annual membership meeting was well-attended, with the proposed changes to the structure of the Board of Directors front and center. Discussion was open in both directions, and board members explained the changes under consideration, answered questions, listened to suggestions, and encouraged ongoing dialogue.

Wednesday morning's opening general session was, as always, quite informative. I was able to attend five of the available technical workshops, most of which were standing room only. Exhibit-hall floor traffic was brisk Wednesday and Thursday, and last-day-less-crowded on Friday.

### Goodies and Gadgets

Each year, I squeeze some time into an otherwise hectic schedule to look for interesting technology, goodies and gadgets. Here, in no particular order, are my Expo 2010 show picks.

In 2007, I mentioned MicroCare Corp.'s fiber-optic cleaning products among my show picks. Improved and recently renamed Sticklers, the products are said to be safe for connectors, splices, lasers, lenses, prisms, diffraction gratings, mirrors, microscopes, LCDs and flat screens. The company's Outdoor Clean Wipes, CleanStixx Connector Cleaning Sticks and Benchtop Lint-Free CleanWipes were being demonstrated. To show the effectiveness of these products, the person in the booth intentionally contaminated a fiber jumper's connectors by rubbing the ends on the side of his face. A quick look at the connector ends with a fiber inspection microscope before and after cleaning confirmed the yuk was properly removed.

[www.sticklerscleaners.com](http://www.sticklerscleaners.com)

Several test-equipment manufacturers have digital signal analyzers — also known as quadrature amplitude modulation (QAM) analyzers — available. One that caught my eye is Spirent Communications' T5000 Tech-X Flex modular handheld, which accepts a variety of modules to accommodate different functionality. For instance, the cable service module with DOCSIS includes signal level meter, QAM analysis, upstream signal generator and spectrum analysis functionality; and it covers the 5 MHz-2,000 MHz frequency range. Want to test MoCA (Multimedia Over Coax Alliance) performance? The MoCA module handles that. Also available are a copper test module and an ADSL/VDSL2 module, the latter two targeted at the telco world. In addition, Wi-Fi is available as an option for the T5000. [www.spirent.com](http://www.spirent.com)

"A tip o' the hat to the Cable-Tec Expo Program Committee and SCTE's HQ staff for yet another superb confab."



In a past life, I did a fair amount of microwave path engineering, site surveys and verification of tower and antenna mounting heights. A gadget in Laser Technology, Inc.'s booth caught my eye: one of its handheld TruPulse series lasers. Oh, to have had one of those in my microwave days. Depending on the model, the TruPulse laser can measure horizontal, vertical and slope distance; inclination; height; and there even is one that has a built-in compass. [www.lasertech.com](http://www.lasertech.com)

We've all had to deal with temporary runs of cable across a sidewalk, driveway, parking lot or maybe even a street, but there hasn't been a truly effective way to protect that cable from being flattened by pedestrian or vehicular traffic. Budco recently introduced just that: the Temporary Cable Guard, available in five-foot sections and suitable for up to .625 hardline cable (they also have a similar product for drops, called Temporary Drop Guard). One cable operator put Temporary Cable Guard to the test, having a fully loaded concrete truck drive over the product...with a piece of .625 cable inside! The coax is said to have survived this little episode unscathed. [www.budcocable.com](http://www.budcocable.com)

JDSU's PathTrak RPM3000 return path monitoring module was my show favorite in 2008 and, since then, the company has made improvements to that 500 kHz-85 MHz line card (a combination spectrum and QAM analyzer) as well as introduced new companion WebView software. It's now possible to evaluate all sorts of upstream performance parameters with this hardware/software combo, including nonlinear distortions, such as linear distortions as group delay and in-channel flatness, laser clipping, equalized or unequalized modulation error ratio (MER) and constellation display on the active DOCSIS channel. This functionality works with all DOCSIS upstream symbol rates; and it supports QPSK, 16-QAM and 64-QAM. The software facilitates various reports and automated node certification, and it allows techs in the field to remotely access the line card's live spectrum or QAMTrak analyzer. [www.jdsu.com](http://www.jdsu.com)

Regular readers may recall a couple of my columns that discussed the characterization of signal leakage from an all- or mostly digital network. One of the conundrums has been the incompatibility of existing signal leakage detection equipment with noise-like QAM signals. Arcom Digital recently productized its new QAM Snare, which allows one to measure leaking QAM signals. QAM Snare has been undergoing beta testing, and it's expected to be on the market by end of this year or in early 2011. [www.arcomdigital.com](http://www.arcomdigital.com)

Is it possible to improve upon the lowly plastic tie wrap? The folks at WatMan, Inc. think so. The company's Mille-Tie Pro reusable, releasable tie strip is a bit different from the usual tie wrap. Made from polyurethane and available in various colors, the 305-mm-long Mille-Ties are said to protect against cable compression or pinching by stretching and de-notching as pressure on the cable increases. As mentioned previously, the ties are reusable and, if excess length is cut off after installation, the cut-off piece can be used as a new tie! Plenum versions are available, as are UV-rated versions. [www.watmaninc.com](http://www.watmaninc.com)

Electroline was demonstrating its new DVM7600 Digital Monitor and DVMTToolBox software. The former is a low-cost, line-extender-like device intended to be installed at ends-of-line locations to monitor as many as seven digital channels simultaneously. When combined with the DVMTToolBox software, cable operators will be able to characterize both RF performance (signal levels, in-channel frequency response, MER, pre- and post-FEC bit errors, adaptive equalizer graph, constellation and so on) and MPEG-2 transport stream performance. Communication with installed DVM7600s is done using the system's DOCSIS channel. [www.electroline.com](http://www.electroline.com)

And my Expo 2010 show favorite? Drum roll, please...

Picking an overall favorite is never easy, and this year I'm departing somewhat from my usual product choice. The nod goes to CableLabs' Proactive Network Maintenance (PNM) demonstration, which showed how to use cable modem upstream pre-equalization coefficients to identify, localize and fix certain outside plant and subscriber drop problems. I wrote about PNM in my October 2010 column, "A Novel Approach to Troubleshooting Linear Distortions." The demo in CableLabs' Expo booth was impressive and stood out as my show favorite. [www.cablelabs.com](http://www.cablelabs.com)

Mark your calendar for 2011's Cable-Tec Expo, scheduled for Nov. 16-18, 2011, in Atlanta. See you there!

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