



TECHNICAL COLUMNS

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LOSING THE LAST MILE WAR

By **RON HRANAC**

A recent discussion on the SCTE-List about problems that can affect digital video service quality elicited the following from industry veteran Steve Allen. He graciously allowed me to share his comments in this month's column.

"Ahhh. Plant Maintenance. A Holy Grail topic amongst the elders of this business.

"What is the weakest link within digital video or any digital service for that matter? Condition of the last mile, and I will add, the last 100 feet.

"Layer 1. Physical layer. The stuff you can touch and feel. The conduit for our signals, along with electromagnetic garbage, if you are not doing a good job.

"A cable network is composed of thousands of parts combined to perform one task: Deliver ~800 MHz of bandwidth to the farthest reaches of the system. A telephone network consists of miles of individual pairs of copper wire and maybe a couple of dozen 'bean' splices to reach the end customer, delivering a bandwidth of maybe 4 kHz on a good day. Not a major leap of engineering in my book, but I am sure it has its own complexities. A cable network is a nightmare to maintain at a high level of performance, but that is what we are selling, and that is what the customer expects. So let's get on with it.

"Ours is the most complex and intricate broadband delivery method currently deployed, and while complex, it is also the most capable, robust and promising network envisioned, provided it is properly maintained.

"As a cable system inspector for Kramer.Firm, inc., I have the opportunity to look at your systems close-up and personal, both before and after rebuilds, upgrades, overbuilds and service expansions. I get to examine your plant, cruise your alleys, snoop around your headend and just plain take your temperature when it comes to the quality and reliability of your plant.

Barely passing

"How would I grade the industry overall, based upon my observations around the country? Maybe a C-. Less than what I would call average, and less than I would expect considering what we are trying to do. I have the ability to recognize quality when I see it, and I do see it, but I also see a lot of shortcuts, unfinished rebuilds, poor quality work, and an incredible lack of competent quality control. The devil is in the details, and operators are not taking the crucial steps necessary to ensure that they are getting what they are paying for. As my employer and mentor often states, 'You get what you inspect, not what you expect.'

"Our customers are moving to satellite by the thousands per month. This is no secret. But the industry is still in denial about it. There is the impression that lost revenue can be made up by raising prices, deploying cable modems, video-on-demand (VOD) or telephony services, in the hopes of winning them back. That is a losing proposition. First you insult them, then you expect them to embrace you? They are leaving in droves for what they perceive to be a more reliable, less intrusive, friendlier service.



Act now for survival

“What can we do about this? Our very best, of course. We need to do it now, or we will not survive. Time is not on our side anymore. We have to compete, and compete as if our lives depended on it. We have to have the better product, services, customer service and attitude now.

“What is the weakest link in digital video? It is taking the time to do the right thing. It is a matter of individual initiative, skill and personal pride in doing a good job.

Stop and fix it

“Example: I recently noticed a broken lashing wire on a main run of cables through my town. About 100 feet of cable is now hanging down. This ‘maintenance issue’ is within one mile of the local cable office, and every cable truck leaving the office each day has to drive past the broken lashing wire. Left alone, this simple broken lashing wire will degrade into a network failure.

It has now been six weeks since I first noticed this issue, and no one from the system has yet stopped to fix it. As far as I can tell, it has disappeared into the ‘noise clutter’ associated with outside plant. It will be fixed when it fails, but probably not before, because no one will take the time to stop and fix it. This is repeated hundreds if not thousands of times around the country on a daily basis.

“We, (and I mean cable system operators), used to have in-house construction crews. They built our plant, fixed problems, took care of pole change-outs and basically were responsible for making sure all was in order. They are gone now, replaced with contractors and one-shots. No one is available for routine plant maintenance. Give it to the service techs, as if they do not have enough to do.

“I could go on, but it would be better if you just took a look at what we routinely find on our inspections at www.cabletv.com.

Preventive maintenance

“Preventive maintenance is the glue that holds a system together. Without it, your system will begin what I call the ‘death spiral.’ If you do not fix things before they become visible to the customer, you will be fixing them after you have lost the customer to satellite.

“Preventive maintenance and the techs that do it should be untouchable. That function is so important that it should exist under the radar. A PM tech’s sole job should be to go out each day and prevent problems, using whatever detection and administrative tools he or she can muster. Good construction people make the best PM techs in the world, and they are under-appreciated for what they find and fix. No glory in this job, just the satisfaction of knowing you prevented something before it blew up in your boss’s face.

“Last mile, that is where we are going to lose the war if we do not put money and effort back into our most basic commodity: outside plant.”

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