

# The complexity paradox

It used to be that broadcast tech offices were filled with extraordinary nerdy discussions about the pros and cons of electrolytic vs. tantalum capacitors and whether a 2N2222 transistor could be used to replace a 2N3904 in a pinch.

We tech guys prided ourselves in knowing how our equipment operated down to the component level. There was a real sense that we knew everything that we needed to know to handle any equipment failure that arose without the need to rely on the help of others. Independence was a point of pride, asking for assistance a sign of weakness, an admission of defeat.

And the women! My gosh, how they admired us for our mastery. Ah, what good memories. Who cares if they are not real. Some of my best memories are false memories.

Things are different today. The advent of the integrated circuit allowed for increasingly elaborate circuit design and sophisticated equipment functionality. Firmware was added to increase chip adaptability. Computers were brought in and adapted to our purposes. Proprietary equipment from different manufacturers began to communicate over Ethernet LAN's and the internet.

The elaborate layering of hardware and software allowed developers to produce systems of infinite complexity that are capable of doing truly marvellous things. It's all wonderful until you have to connect it all together, or until something stops working.

This is where the complexity paradox comes in, the idea that increasing complexity demands increasing simplicity. Equipment and systems have reached such a degree of complexity that our industry has had to change the model subscribed to in order to install new systems or solve problems.

No longer able to rely on one person, or even one department, as a one-stop solution to all technical problems, over the past number of years each manufacturer's "Help Desk" has taken on a more significant role in sorting out and solving problems. Got a problem? Not sure where to start? Just call the manufacturer and let them figure it out. From virtually infinite complexity to dog simple in one step. Time to sit back and pat yourself on the back before telling your boss you've solved another one.

Or not. Or sometimes. Or maybe. Or at least until you're

told they've got systems installed all over the world and have never had a report of "that" problem before. Or they blame it on the other guy's box upstream or downstream of theirs. Usually the other guy does not agree and points his finger in another direction.

Bottom line here is that even though new mechanisms exist to help your staff cope with new realities, local technical staff still play a pivotal role in the smooth running of broadcast operations. Having the overall perspective of the in-house systems, coordinating and steering communications between involved parties, filtering out self-serving misinformation from the relevant requires an educated, sophisticated staff. Strong and numerous relationships with vendors, manufacturers and colleagues are vital to keeping things running smoothly.

Education is an imperative and must be ongoing, though where to get the education is in itself a complex question. So many technologies and pieces of equipment to cover. Where to go? Allow me to be your Help Line and simplify this question. The answer is the Central Canada Broadcast Engineers (CCBE). It covers many of your technical education needs and provides a foundation for networking with key industry sources.

So if you are in a position of authority and someone from your technical staff asks to go to the CCBE convention this September 16, 17, 18, 19 be sure to say, "Of course!".

Better yet, if they don't ask to go ask them why not? Then send them. Tell them you need them prepped and ready to go for the coming fiscal.

For the \$150 registration fee we'll feed your staff with food for both thought and body. Food for thought comes in the form of four days of workshops, paper sessions, vendor suites and networking with other industry professionals. Food for the body comes in the form of... well, food. The important thing is you don't have to pay for it. Even in this modern age, some things will never change. Free will always be a good thing.

And you shouldn't need a help line to tell you that. For detailed information check out <http://ccbe.ca>

*CCBE Membership Chair Lorne Anderson is Technical Director of CHUM Radio Winnipeg. He may be contacted by e-mail at [lorne.anderson@chumradio.com](mailto:lorne.anderson@chumradio.com).*



**BY LORNE ANDERSON**