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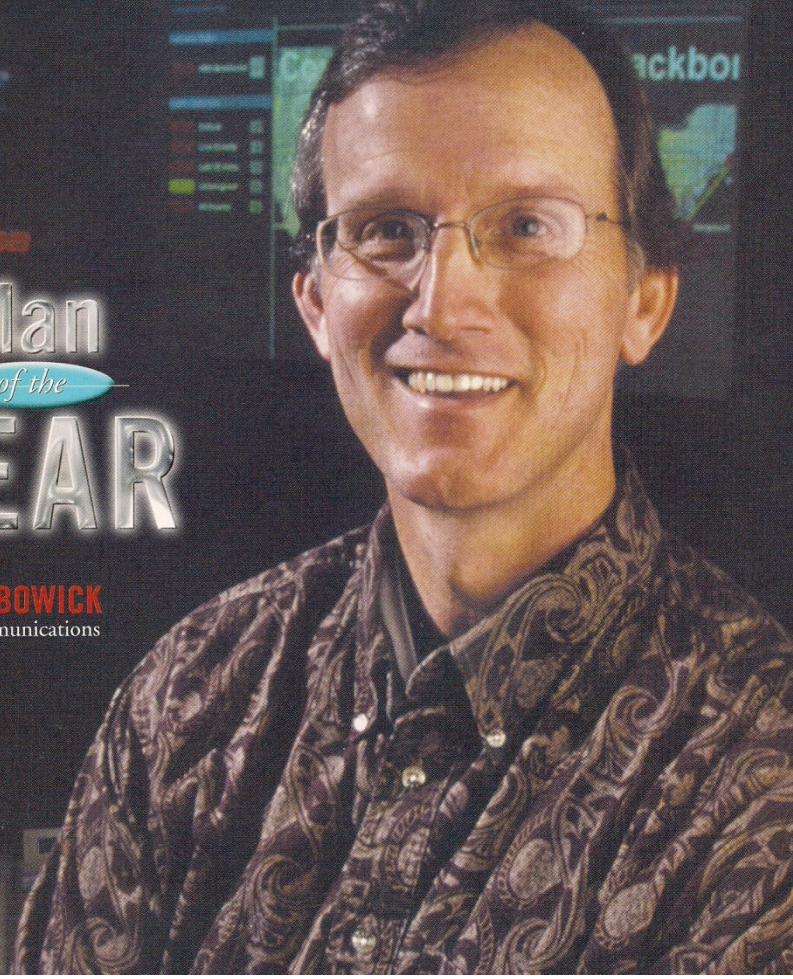


CEI

JANUARY 2003

Man
of the
YEAR

CHRIS BOWICK
Cox Communications





Chris Bowick has helped position Cox Communications as a dominant provider of video, voice and data services to residential and business customers

By Roger Brown, Editorial Director

It's a beautiful late autumn afternoon in Atlanta when Chris Bowick climbs into the cockpit of his single-engine Beechcraft Bonanza aircraft, taxis out to the runway and takes off into the sky above. For him, flight is a source of mental exercise. It's also a practical means of transportation. But perhaps the most intriguing part of flying a single-engine aircraft is the view it provides. There's nothing that puts things in perspective better than an aerial view of a landscape. For it's only from the air that one truly "sees" the topology below.

Bowick brings that same sweeping perspective to Cox Communications, where he's thriving as the company's senior VP of engineering and chief technical officer. It's been his role to align the company's physical assets--its network and technical personnel--with CEO Jim Robbins' vision of where the company needs to go to become a world-class, 21st-century media company.

By all accounts, Chris has successfully stepped out of the long shadow cast by former Cox CTO Alex Best and assembled a top-notch technical team that's second to none in the industry. Under Chris' guidance, Cox networks now support 6.26 million video subscribers, 1.7 million of which subscribe to the digital tier; 1.27 million high-speed data customers; and 651,000 telephony customers (as of the end of September 2002).

Cox was the first major operator to announce that it will be free cash flow positive for all of 2003--a noteworthy feat, given that cable operators have never been graded that way. The company has been able to hang onto its core video subscribers, even in the face of mounting competition from DBS providers, by bundling voice and data with its video product. And all of that has been made possible by the technical glue that holds Cox together. For that, CED magazine is bestowing its Man of the Year award on Chris Bowick.

Early influences

In addition to aviation, electronics had a big influence in Chris' life, even from the earliest stages. "I don't know exactly when it (interest in electronics) started," Chris admits. "But my dad was in radio all his life. He had a morning radio show ("Coffee with Bill" it was called) in Columbus, Georgia, and my mom always made sure we listened to

the show during breakfast, no matter how bad I thought the music was. As a toddler, he'd take me in and actually had me on the microphone sometimes, singing songs," he sheepishly admits.

Chris' father Bill was a local celebrity of sorts, hosting a morning radio show. During the program, he'd talk about local issues and even had Chris sing songs. Even though he was a one-man show, Bill made it seem like he had company in the studio.



"He had an engineer rig up a tape recorder that would change his voice by speeding him up a little bit," Chris says. "It changed his voice to the point where he was another character and you couldn't tell it was him.

"He called the character Phillip Space. Fill-up-space. Everybody thought Phillip Space was a real guy. He would use this guy to do little skits and pan local politicians. He'd use him to have some fun." --RB

Maybe it was the comfortable confines of the control room, or the fact that he grew up during the Space Age that triggered Chris' engineering and flying interests. Even he's not sure. "But it was pretty early on that I really fell in love with electronics," he says. So much so that while still in high school, he buried himself in books, studied and took the battery of tests necessary to become a ham radio operator. "I was intrigued with the ability to build a device that could communicate around the entire world," he says. As a testament to his goal-oriented persona, it wasn't long before Chris mastered the Morse Code (thanks to Richard Stevens, his hometown ham radio mentor) and earned the extra-class license, the top radio license available (WD4C).

As for flying, Chris was simply in the right place, at the right time, thinking the right thoughts. "I started learning how to fly when I was a senior in high school," he recalls. "I got a job at a local fixed-base operation, gassing and washing airplanes." But instead of taking money in exchange for working, Chris bartered for flight instruction. Shortly after graduating from high school, Chris not only held a sheepskin, but a pilot's license as well.

Lest anyone think that Chris was the stereotypical electronics nerd, it may intrigue people to know that he was the starting quarterback and safety for three years at Pacelli High School in Columbus, Ga. He was also the team's captain and most valuable player his senior year. "I wasn't geeky, I just loved electronics. I knew that's what I really wanted to do," he notes.

His athletic prowess and vocational interests created a conundrum, however. On one hand, he loved sports and yearned to play football in college. He even had some scholarship offers. But he knew his future was tied to electronics and engineering--but those schools weren't the ones offering the scholarships. As one of six children growing up in a middle-class family, it was critical that Chris find financial assistance to attend college. "I wanted desperately to play football for Georgia Tech, but they never offered me a scholarship," he laments.

So, he compromised--and managed to combine his love of electronics, aviation and athletics by accepting a Congressional nomination and appointment to the United States Air Force Academy, and an invitation from coach Ben Martin to join the football program as a quarterback.

Modern-day challenges

Today, Chris still flies as often as possible. It serves as a release from the everyday stresses and yet presents a technical challenge, he says. It also gives him a unique perspective of the Earth's landscapes. And just as the ground below consists of a set of subsystems that together create a complex environment, so does today's cable network. There are myriad commingled issues that have to be thought through, analyzed and acted upon.

Talk to any pilot, and they'll almost always have some funny (or harrowing) story to tell about life in the cockpit. Chris is no exception. After spending most of his senior year in high school taking flight instruction, he got his pilot's license shortly after graduation.

So, who should he take up on his maiden voyage? His girlfriend (and now wife of 25 years), of course.

"As luck would have it, on that very first flight, the radios in the airplane decided to die," recalls Chris.

Bowick, not one to panic, found a unique solution to that problem. "I found that if I pulled back on the throttle, I could communicate with the tower. So I'd get high over the airport, cut the power and then could communicate. She still remembers that." --RB



The modern-day cable CTO must balance fiscal responsibility and technical innovation--which presents its own set of challenges. Investors and shareholders, in the wake of the past year's corporate scandals and accounting mayhem, are demanding that cable operators reduce their capital expenditures, lower their operating costs, and grow revenue through new service launches.

"The story with Wall Street now is, 'Show me the money,'" notes Chris. "That forces us to focus more on returns and to instill that mindset in everything we do. We continue to ask ourselves questions like, 'Why are we doing this? How much am I spending? What projects and programs are going to give us the biggest bang for the buck?'"

Consequently, Bowick and Cox are taking the "go-slow" approach when it comes to video-on-demand, but are ratcheting up the marketing campaigns for high-speed data and telephony. In fact, Cox plans to deploy telephony service in a ninth market during 2003. That makes the company unique in the cable universe, but as you'd expect, there's a legitimate rationale for the strategy.

"It's really a business issue," says Bowick. "Other MSOs haven't had the triple threat (a bundle of video, voice and data services), so they're looking to VOD to provide that bundling effect. We've already got a great bundle that is doing extremely well for us."

Cox does plan to deploy VOD in four different markets in 2003 to monitor and evaluate buy rates, cannibalization and return on investment before the company deploys the service more broadly. "You could argue that we're behind on VOD deployments," says Chris. "We think we're just taking a different view on VOD. We could launch as broadly as anybody else - we've just opted not to at this point."

A ramblin' wreck

After two years at the Air Force Academy, Bowick had a choice to make. He could either stay in the Air Force and commit the next seven years of his life to the government, or transfer elsewhere to another college. Anxious to get on with life and a career, Chris chose the latter--and enrolled at Georgia Tech. To pay for the tuition, he used what was left of his Air Force salary (students at USAFA received half the pay of a second lieutenant), and then went out and got a job.

That job was as a student assistant in the electromagnetics lab at the Engineering Experiment Station at Georgia Tech--a facility known today as the Georgia Tech Research Institute. Two years later--in 1977--Bowick graduated from Tech with a bachelor's degree in electrical engineering. But he didn't leave. Instead, he stayed in the area, married his high school sweetheart, Maureen, and took a job as a full-time member of the staff of the Experiment Station as an engineer. (Maureen and Chris recently became empty nesters; daughter Zoe is 22 and trying to make it as a dancer in New York City after graduating from the University of Arizona, and son David is now 19 and a junior at Berklee College of Music in Boston.)



While at Cox, Chris put together a team to help test and integrate multiple versions of software into digital set-tops. The lab was so successful, it was recently enlarged.

A year later, Chris took a call from a headhunter who was searching for an engineer to join Collins Avionics in Florida. When Chris heard what the job was, he almost couldn't believe his ears. Collins specialized in designing radios for airplanes.

"Cool!" he exclaimed.

So Chris and Maureen packed up and moved to Melbourne, Fla., where Chris started at Collins as a bench engineer, designing aviation radios. "It was really neat, because we got to test what we built on the breadboard, which meant we got to go up in planes."

But the fun didn't last long. In the early 1980s came a gasoline shortage, which caused prices to soar. Consumers had to endure long lines at the pumps just to fill their cars with gas. The crisis also precipitated an economic disaster in the general aviation industry. After a couple rounds of layoffs at Collins, Chris began thinking he ought to look elsewhere for employment--before he became a victim of the downsizing.

One day in early 1981, a headhunter called again, this time inquiring about a job with a Georgia-based company called Scientific-Atlanta. Despite his tenure at Georgia Tech and familiarity with Atlanta, Chris had never heard of S-A. When he found out the company was a supplier to the cable TV industry, he was less than impressed. "My first reaction was that it wasn't high-tech enough," he recalls. But it was a Georgia-based company, which meant he'd be going "home" again. So Chris decided to schedule an interview there.

The interviews obviously went well; it wasn't long before Chris moved to Atlanta and started designing headend equipment for the company. His boss was none other than Alex Best--the guy who'd have probably the greatest influence on Chris' professional life.

Upon joining the crew at S-A, Chris quickly fit in. He was immediately tasked with designing an obscure device called a reconstruction comb generator. Designed for hub locations, the generator was needed to phase lock a headend channel lineup that was being transported to a hub.

"It wasn't a big seller," Bowick laughs. But it caught his interest. He then moved on to redesigning S-A modulators and other product line mainstays, many of which had been originally designed by Alex. Throughout the 1980s, Chris progressed up the food chain at S-A. From bench engineer to project manager to headend engineering manager. Then up to headend director of engineering. Eventually, he would succeed Best as S-A's VP of engineering for headend and Earth station products.

"The years at Scientific-Atlanta were really, really good years," Chris explains. "There was so much growth in the industry during that period. We were constantly developing new products."

Chris even set up a skunkworks team at S-A that focused on developing MPEG technology that might eventually be used for digital video products for cable operators. The group was quietly working behind the scenes while S-A was publicly trying to gather industry support for a proprietary encoding scheme known as vector quantization.

Trading spaces

At the same time, life on the other side of the fence--cable system operations--intrigued Chris. "I kept looking at that side of the business, thinking, 'Wow, that looks pretty neat,'" he recalls. He began to network.

He got his first chance to join a corporate MSO staff when Bob Luff, CTO at Jones Intercable, asked him to join his team in Denver. Discussions took place, but Chris ultimately held off. Thinking he was CTO material himself, Chris decided to stay at S-A.

In one of life's little ironies, a year later Luff left Jones and joined the senior management team at S-A. A day later, Jones President Jim O'Brien phoned Chris to arrange a meeting in Chicago. A couple days after that meeting, in September 1991, Chris was offered the job as Jones' CTO--a position he eagerly accepted.

To outsiders, it looked like a trade--a quid pro quo of sorts--had been arranged between the powers that be at Jones and Scientific-Atlanta. But that's because no one knew of Luff's earlier offer, Chris says. "People would stop me on show floors for years afterward and I'd have to explain all that," Bowick notes.

He recalls the experience at Jones fondly. "It was a great move for me," he says. Instead of being totally focused on a relatively narrow R&D-based agenda, Bowick could now widen his scope into areas he hardly knew existed. In many ways, the executives at Jones were putting a lot of faith into Bowick's abilities.

"For someone like Jim O'Brien to give me that opportunity, considering that I didn't have an operations background, was amazing to me--and something I'll never forget," Bowick says. "Jim and Ruth Warren (group VP of operations at the time) were great mentors to me. Quite frankly, I had a lot to learn."

While at the Air Force Academy, Chris had the chance to attend a three-week Airborne parachuting school in Fort Benning, Ga., which just happens to be located in Columbus, where he grew up. After a week of ground school and a week of tower school, Bowick was finally ready to make his first jump.



On the morning of that first jump, Chris was among hundreds of others who were in a hangar, putting on parachutes, when suddenly, a drill instructor marched up to Bowick, saying: "I want to know who the hell you are!"

Nonplussed, Bowick looked around and said, "Bowick, sir."

"Word came down for the top today that you're jumping first, and I want to know who the hell you are!"

Unbeknownst to Bowick, a friend's father (who happened to be a colonel and the commander of the jump school at Fort Benning) had called Chris' parents and asked if they wanted to see Chris jump. Familiar with parachute jumps, where there are literally hundreds of soldiers in the sky at one time, Chris' parents wondered how they'd know which one was their son.

"He'll be first," came the reply. --RB

The iconic Glenn Jones also had a huge influence on Chris' life. As part of his role as CTO, Bowick had responsibilities for Glenn's multiple other businesses as well. That meant Chris needed to get up to speed on operations--fast. So Chris would get out into the systems and ride along with field installers and technicians. He recalls one winter day in Chicago, when he was doing an install, and was nearly attacked by a frenzied dog. "This is what these guys (installers) deal with all the time," he says. "Lucky for me, it (the dog) didn't actually get me--only the leg of my pants."

All the while, Chris helped direct the Jones systems as they upgraded to 750 MHz. The company had about 1.3 million customers it owned (most Jones systems were complex limited partnerships) and was looking to expand. With the help of Bell Canada, which had invested heavily in Jones, the company built a state-of-the-art system in Alexandria, Va. and began to offer residential telephone service.

"Early on, I was deeply involved in cable telephone and putting together a new-business development team," Bowick notes. He would later bring that expertise and experience to his role at Cox.

At the same time he was CTO of Jones, Chris was also president of a small Jones-owned company, called Jones Futurex, that owned technology related to PC-to-PC encryption. The company didn't have any cable TV implications, but it came in handy when Chris decided to augment his electrical engineering degree with a master's in business administration. "Futurex was a classic case study because the manufacturing facility built its own product, but also contracted other work to keep its equipment running," Bowick notes. "It was a classic turnaround scenario. I was able to turn it around and, for the first time in its history, it actually started making money." He then split the company into two different operating companies for the purpose of selling them

off as non-strategic assets.

Jones would challenge Bowick, too. "I would go to lunch with Glenn and I'd come back with my head swimming," he recalls. "He was thinking so far out there about so many things. His vision for creating an educational system on the 'Net is amazing. I used to joke that Glenn would start a company a day. He is constantly thinking. He's a very, very smart guy--and very difficult to keep up with."

Going home

All during his tenure at Jones, Chris often was in contact with Alex Best, who in 1986 had left Scientific-Atlanta to become CTO at Cox Communications in Atlanta. Now, as peers, Chris and Alex would often compare notes and strategies. After six years at Jones, however, Bowick was longing to return to his Georgia roots. On a whim, he phoned Alex one day, asking his mentor and former boss to keep an eye out for companies that might need Chris' expertise.

Unbeknownst to Chris, Alex had been contemplating retirement and had been tasked by Cox CEO Jim Robbins to name an eventual successor, but had made little progress. "When Chris called, I sat there for a minute, stunned," recalls Alex. Then I said, "Have I got a deal for you!"

The two forged a deal whereby Chris would come to Cox, take on various projects and be groomed to one day take over for Alex. So he made the leap to Cox in April 1998, joining the company as VP of technology development. The transition period to CTO was unconventional in that it was lengthy; but it was a job Chris didn't mind waiting for.

"I've always admired Chris because he has a 'can-do' attitude that's highly contagious," Alex says. "He's a bulldog. Once he's pointed in the right direction, he just goes and does the job."

Upon joining Cox, Chris was immediately put to work, working with the company's digital video team, which was launching digital set-top boxes. The rollouts were being plagued by software upgrades and revisions from both Motorola and Scientific-Atlanta that were causing the set-top boxes to lock up.

"We got to the point where we were asking our customers to unplug the box and plug it back in, just to reboot it," Bowick says. "It was horrible. Sometimes it was thousands of boxes at a time, sometimes it was onesies, twosies. But it was not a fun time."

In response, Cox constructed an internal team of software and hardware engineers whose task it became to test the various software packages from S-A and Motorola to ensure that they wouldn't bring the network to its knees. But the process was creating an unacceptable bottleneck.

"Early on, it was taking weeks and weeks," recalls Chris. "We were operating behind the industry, as far as software revisions, but at least our customers weren't unplugging boxes constantly. So that helped us reduce our service calls and calls into the call center.

Convinced that the issue would only get more complex as time goes by, Chris continues to fund the lab and its efforts to ensure boxes don't quit working unexpectedly. And the effort has paid off: For the first time ever, the number of digital service calls has dipped below analog service calls, Bowick says.

When Alex began to target his departure date, Bowick felt he was up to the challenge of taking over for him, but he admits to being intimidated at first. "Here's this icon in the

industry, known and loved by everybody, and here I am, about to step into his shoes," says Chris. "It scared the hell out of me."

"People ask how you replace Alex. The answer is, you don't. You can't. And if you try, you're going to fail. I never tried to replace Alex. I have my own way of doing things. I'm a fairly independent thinker, I think I'm a pretty good manager of people and I know technology fairly well. "But if you think about it, Alex was a mentor of mine in some shape, form or fashion, for 21 years," Chris notes. "A lot of what I do has been shaped by my relationship with Alex."

For all concerned, the transition has gone extremely well. "Chris has taken over my job a couple times, and each time he's improved the position once I left," Alex says. "The job at Cox was not an easy position to step into, but Chris has done it with style and grace. He hit the ground running and hasn't missed a beat--and that's saying a lot."

Robbins has been pleased as well. "It's been terrific" having Bowick on board, Robbins says. "He and Alex think a lot alike. Chris is a very solid engineer in all the aspects of the modern cable platform. He's a unique animal in that he has a good understanding of emerging technologies and a good businessman's head, too."

Bowick has surrounded himself with a well-respected and capable team of colleagues as well. "Whenever I assume a new role, I go to my boss and each of my peers in the company and do a needs analysis," he says. He finds out what works and what doesn't. They talk about what can be improved and what his focus should be.

"From the time I first started at Cox, most people knew why I was there," Chris maintains. "And yet I got this very warm reception from all of Alex's direct reports as well as everyone on Jim Robbins' staff. I can't tell you how much I appreciated that. It's wonderful to walk into an environment and be welcomed with open arms."

After a short time, however, it was clear to Chris that the technical staff needed to be reorganized, especially as Cox's agenda was slowly shifting away from an aggressive system rebuild program to one dominated by maximizing revenue and providing a return on investment.

For example, Bowick created a team, headed by Mark Williams, to focus on wresting more efficiency out of field operations. That group focuses on reducing service calls and truck rolls and using workforce automation tools to get the most out of Cox employees. That group is putting technology in service and install vehicles that will automatically route them to the next service location.

Longtime Cox engineer Dick Mueller heads up everything network related. Under his watchful eye are network planning, drafting and design, the network operations center and system monitoring.

Albert Young leads Cox's telephone engineering group, while Bowick was able to lure Jay Rolls back to Cox to oversee the data side of the house. John Hildebrand is in charge of multimedia, or digital video, engineering. Jim Renken heads up operations support and the transition to operations for new products. And new addition Cheryl Love heads up materials management, and is focused on a relatively new initiative within Cox that's designed to improve the material supply chain.

The telephony factor

So why is Cox so aggressive on phone service, when virtually every other MSO has backed off? In a word, timing.

When Cox first jumped into the telephony world roughly five years ago, it did so aggressively, yet carefully. It concentrated on just a couple markets, and didn't ambitiously overspend. And it chose not to wait for voice over IP.

"A lot of people argue that telephone is too expensive to get into," notes Bowick. "But our contribution margin from telephony today is a significant piece of our cash flow, and it's still growing.

"I think a lot of people are in for a rude awakening by waiting for voice-over-IP and assuming it's going to be easier or less expensive (than the circuit-switched approach). If Cox had decided to wait for VoIP, we'd still be waiting.

"What people need to understand is that telephone is an extremely complex business," Bowick continues. "We've been at it for five years now, and there's a very steep learning curve. We now have the entire back office in place, along with the network operations center, interexchange and local exchange carrier agreements and operator services. We even know how to do phone books," he laughs.

That said, Bowick and his team keep a close eye on softswitch technology and is evaluating units in its VoIP lab. "Every time we have to order another telephony switch, we have a decision to make," Chris notes. "Is it time (for VoIP)? Thus far, we've said no, it's not time yet."

These are indeed serendipitous times at Cox, thanks to the company's success with telephony, the national data backbone it was forced to build when Excite@Home went out of business, and the advent of VoIP. Cox now has access to a high-speed, packet-based network that literally interconnects each of its markets.

"This is a big deal," notes Bowick. "When I pick up the phone and dial the San Diego system, I pay a third-party long distance provider to get my voice signal out there. But now, I've got a great network between here and there, so one day, we could carry an IP voice call across the backbone. We're beginning to leverage the backbone from a cost and efficiency perspective."

With telephony launched in eight markets, 14 telephony switches located around the country, 11 regional data centers and three service data centers all tied to the network, Bowick and Cox can begin to think about how to use the network in new and interesting ways--including the potential transport of long distance traffic for Cox's commercial and residential subscribers.

In addition, if Cox co-locates a softswitch in one of its service data centers, it would have an IP overlay solution that could cover every Cox market and every Cox subscriber. "The beauty of VoIP is that I can put a softswitch out there on the backbone and serve all of our smaller systems, where we haven't deployed telephony yet," Bowick notes.

VoIP can even be deployed in locations where Cox has already purchased a circuit switch, once that switch becomes fully populated. "We can do that in a timeframe that makes sense to us, at a cost that makes sense to us," he stresses. "At some point in time, there might be customers sitting next door to each other, one of which is circuit switched while the other is soft switched, and they won't even know the difference."

The reason the network can be leveraged that way is because it's nowhere near its capacity limit--yet. But there are bandwidth abusers out there, Bowick admits. And it's those users who will probably force Cox and other MSOs to begin imposing byte caps on their high-speed Internet users.

Cox is currently trialing tiered pricing in New England and Las Vegas, and is contemplating implementing byte caps for the abusers. Results are a long way from being finalized, but it's turning out that the vast majority of residential customers are staying with the normal product, which offers 3 Mbps downstream and 256 kbps upstream.

"Something like 2 percent of our subscriber base is using 50 percent to 80 percent of the bandwidth," he says. "The question is, what do you do about it? Do you want to become just a dumb pipe? We need to move toward implementing byte caps, but we know it's going to tick a lot of people off. The chat rooms will go wild."

Should that happen, Chris might find he has a lot of company the next time he takes to the skies to avoid the day's stresses.

E-mail: Roger Brown
