



Once a comms professor, Yarbrough ('83) now helps thwart cyberattacks on DoD

by Chuck Gordon

Every day, hackers try to infiltrate the Department of Defense's digital network. Not all of them wear black hats. Chuck Yarbrough '83 helps oversee and develop strategy for a team of hackers who poke holes in the DoD's cyber defenses in an effort to make them stronger.

Chuck Yarbrough's first foray into the world of bits and bytes came in the mid-1980s, while he was still a communications student. Working on his master's in speech communications at Louisiana State University, the 1983 Wingate graduate bought an IBM PC Junior so he could more easily work on his dissertation. "They discontinued the model the next month," Yarbrough says.

Soon after, the computer stopped communicating with the printer, and there was no desktop support available for an obsolete machine. So Yarbrough figured it out himself, prying open the computer's case and pinpointing the problem. "I just figured out how to replace the entire guts of the machine," he says. "From that point I was hooked on doing hardware, just building computer systems. It was a hobby."

It's a hobby no longer, and that's a good thing for the nation. After serving as a speech-communications professor for close to a decade – including a couple of years at Wingate in the early 1990s – Yarbrough reinvented himself as a computer tech, working his way up from desktop support to internet security analyst. He is now a senior engineer with Carnegie Mellon University's Software Engineering Institute, working primarily with the program that keeps the United States' enemies from hacking into the Department of Defense's digital network.

Last week, Yarbrough and his colleagues in the DoD CyberCrime Center's Vulnerability Disclosure Program (VDP) received the DoD Chief Information Officer award for cybersecurity. They were presented with the award at the Pentagon Auditorium.

The VDP grew out of the DoD's 2016 Hack the Pentagon "bug bounty" program, in which accomplished hackers were paid to try to penetrate the nation's cyberdefenses and then report any vulnerabilities to the DoD. Now the VDP does the same thing, on a larger scale.



“Basically what we’re trying to do is reduce the attack surface of the DoD, so the bad guys can’t get in, and also we find people on the inside who are trying to do bad stuff,” Yarbrough says. “It’s been very successful. We’ve had some major systems I can’t tell you about that they’ve shut down and brought back up more secure. It has worked very well.

“It’s fun to be involved in something that actually works. It makes you feel good that you’re actually contributing to something that’s making everybody safer.”

Chuck 2.0

Yarbrough got to this point in his career in a roundabout way. He came to Wingate primarily because his father, Charles, got a job there teaching biology. After graduating with his communication degree in 1983, Yarbrough began following in his father’s academic footsteps, finishing his master’s in speech communications at LSU and completing all his coursework for a Ph.D. in speech communications at the University of Pittsburgh. He never completed his dissertation, though, instead opting to teach. Over the next nine years, he worked as an assistant professor at Westminster College, Wingate, Georgia Southern and Valdosta State.

At Georgia Southern, Yarbrough was the guy in the department who knew how to connect everybody’s computers to the shared printer. He wound up doing double duty as professor and IT expert at the school.

When he moved to Valdosta State, Yarbrough concentrated on teaching. But after three years he couldn’t deny the itch to re-enter what by this time was a burgeoning tech world. So he swallowed his pride, moved back to North Carolina and started working at BestBuy while getting his IT certification. He eventually got a job as an entry-level desktop-support technician.

"Wingate professors taught me how to analyze things. That’s so important no matter what you do, whether you’re looking for which car to buy or whether it’s to work for the DoD."

Starting at the bottom of the totem pole didn’t bother him.

“I think of it as my reboot: Chuck 2.0,” Yarbrough says. “One thing my parents and my grandparents always told me was never be too proud to do good work. Humility’s one of those things that all of us struggle with. It kind of gets into my overall philosophy about things, about a service mentality. You’re a steward of your time here on Earth.”

Over the past 22 years, Yarbrough has steadily worked his way toward the top of his profession. He was recently promoted to senior engineer, and this year he was selected to be a Technologist Fellow with the National Security Institute at George Mason University.

There, he puts his Wingate degree to good use. “Four weekends throughout the year we head somewhere to meet with a bunch of policymakers, to teach technology people how to talk and communicate technical things to policymakers and Hill staffers,” he says. “Translating tech to policy is a challenging area. A lot of times policymakers get bad advice, because the people advising them don’t have a technology background. But there’s a whole opportunity for people who have a technical background and can communicate to have an impact.”

With the VDP, Yarbrough doesn’t do any of the hacking himself. He works primarily on strategy and expanding the program, pondering what risks might present themselves months or even years down the road and promoting the program to those who fund it.

In that way, he uses his Wingate communications degree every day. But even in his previous roles – database administrator, IT project manager, systems admin – Wingate helped him every step of the way.

“Maybe I had the dream all along, but Wingate fanned the flames and gave me the tools, with the humanities background,” he says. “People talk about going into STEM. I say that’s great if you’re called to that and you’re good at it. But if you really want to learn how things work, get a humanities degree, like comm arts or comm studies, because the job you’re going to be working at in 20 years hasn’t been created yet.

“What I learned taking Lex Youngman’s Art Appreciation, Rachel Walker’s English classes, Byrns Coleman’s Greek course – I learned how to dig into stuff. They taught me how to analyze things. That’s so important no matter what you do, whether you’re looking for which car to buy or whether it’s to work for the DoD.”

November 21, 2019

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