Learning to Live in an Insecure World

David Alan Grier, Djaghe, LLC

Just as we teach our children about how to protect themselves from the dangers in the world, we need to educate ourselves about cybersecurity, to protect ourselves from the threats of the cyber world. This issue on cybersecurity education is one step in that direction.

Long ago, we learned how to educate our children to live in complex, urban societies. As a city dweller, you need to protect yourself. Lock your doors. Be careful with strangers. Don't sign your name to a paper you don't understand.

The lessons of protecting oneself in cyberspace are similar, although they involve a much more complex set of technologies. Choose strong passwords. Don't give sensitive information to strangers. Don't commit yourself to something you don't understand. It will probably take a full generation for us to teach these skills, just as it generally takes a full generation for a rural family to feel comfortable with city life.

We are still learning how to instill the discipline of cybersecurity, and we are finding that there are many obstacles to applying the broad principles of the field to concrete problems. Our chief information officer tripped on one of these hurdles at the start of the year when he sent us an email warning us of phishing attacks that contain nonstandard URLs, ones that superficially resemble links to organizational resources but actually connect to something outside the organization. Of course, his

email contained a nonstandard URL that connected to a security consultant's site. When he was notified of it, he did the opposite of what he should have done. He defended the inclusion of the URL rather than searching for a way to help my colleagues make better judgments.

Our issue today helps us understand how far we have come in developing the foundational material for cybersecurity education. Our sibling periodical, *IEEE Security & Privacy*, has been actively developing the ideas behind this kind of education. Just last year, it covered the progress we have made on building a body of knowledge for cybersecurity ("Scoping the Cyber Security Body of Knowledge").[1] Our issue today advances that discussion. It is the result of dedicated work by our Guest Editors Ann Sobel, Allen Parrish, and Rajendra K. Raj. Their work reminds us that we will need to do more than choose strong passwords and be careful with strangers. That quick little text that seems to come from a friendly colleague may actually be a message from a malicious bot that is attempting to test how much you know about the foundations of cybersecurity and how much you practice those ideas. **C**

REFERENCE
1. A. Rashid et al., "Scoping the cyber security body of knowledge," *IEEE*

DAVID ALAN GRIER is a principal with Djaghe, LLC. He is a Fellow of the IEEE. Contact him at grier@ email.gwu.edu.