

Wyo Computer Science
Guest Speaker Worksheet

Name -
Class Period -

We will be fortunate to have Mr. Phil Mellinger, a 1975 Wyo graduate and Chief Information Security Officer for First Data Corporation, as a guest speaker on Tuesday May 21, 2002. Please read the following biography and research and answer the first three questions on this worksheet.

Biography -

Mr. Mellinger is responsible for information security at First Data Corporation, a company specializing in electronic payments. He leads First Data's efforts in digital signature technology, Internet fraud detection techniques for the credit card industry, and technical investigations. Previously, he headed a multi-agency federal task force to enable citizens to securely interact with the U.S. government over the Internet using digital signatures. During a 21-year career in high-tech security, he has served as the chief cryptographic-engineer for NATO, the group leader for network security at MITRE (a federally-funded "think tank"), an Air Force Technical Special Agent (technical investigator), and a certified systems analyst at the National Security Agency (NSA). He recently retired from the Air Force Reserves, where he served as an advisor in network security, information warfare, and computer crime investigations. He has a bachelor's degree from Penn State University, a master's degree in computer science from Johns Hopkins University, and an App. Sc. in computer science from George Washington University. He has also been awarded patents for new methods for detecting payment card fraud.

1. What are digital signatures? (Hint: digital signatures are also known as "public key cryptography")

2. Who invented the concept of digital signatures and when did they invent it?

3. Why are digital signatures important to the future of the Internet?