



THE 1997 RSA DATA SECURITY CONFERENCE

SPEAKER BIOGRAPHY

CRYPTOGRAPHERS' TRACK

Subliminal Channels

Speaker: **Gustavus J. Simmons**

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Presentation Overview:

Developments in the notion of subliminal channels will be discussed. With subliminal channels, redundant information introduced to ostensibly provide an overt function -- such as digital signatures, error detection and/or correction, authentication, etc. -- can be subverted to provide a covert communications channel.

Speaker Background:

Gustavus James Simmons was born October 27, 1930. He received an M.S. Degree in physics from the University of Oklahoma in 1958, and a Ph.D. degree in mathematics from the University of New Mexico in 1969.

He retired in 1993 as a Senior Fellow and Director for National Security Studies at the Sandia National Laboratories, Albuquerque, New Mexico. Earlier he was Manager of the Applied Mathematics Department and Supervisor of one of two divisions at Sandia devoted to the command and control of nuclear weapons. In all of these positions, he was primarily concerned with questions of information integrity arising in national security: command and control of nuclear weapons, verification of compliance with various arms control treaties, individual identity verification at sensitive facilities, etc. His research has been primarily in combinatorics and graph theory and in the applied topics of information theory and cryptography, especially applied to message authentication and systems design to achieve this function.

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PRESENTATION