1993

Resume of Gilbert M. Lundy, 1993

Lundy, Gilbert M.

Monterey, California: Naval Postgraduate School

Gilbert M. Lundy

Associate Professor

(408) 656-2094

lundy@cs.nps.navy.mil

Research Areas

Telecommunications networks; formal models for communications protocols; high speed network protocols; automated verification and testing of communications protocols; and network security.

Research Descriptions

My research interests are in telecommunications networks and computer networks generally. Most of my work has been in the specification, analysis and testing of communications protocols. This often leads me to suggestions for possible improvements of existing protocols, correcting errors in them, or both. Recent work is in high speed transport protocols, multicasting protcols for reliable communications, and wireless protocols.

I am also interested in military communications and in network security. In the past year, I have been studying and evaluating some of the U S Army's current networks and their future plans for these networks.

Security in networks and communications is a topic I have recently become interested in. This is a topic of relevance to both industry and the military, as several cases of computer break-ins and espionage have occurred in recent years.

Relevance to DoN/DoD

As a former military officer, Prof Lundy is well aware of the importance of secure and reliable communications to the military. Communications, which is essentially the movement of bits, representing information, are the nervous system with which the brains - the commanders and their computers -- control the "body", the military forces. This movements of information takes on many forms; fax, voice (telephone), voice (radio), video data, computer data, and others.

Prof. Lundy's current study of the Army's Tactical Packet Network is an example of work directly relevant to DOD needs. Other work directly relevant has involved study of Navy communications systems with thesis students. And of course, security is obviously critical to military communications.

Recent Publications

Lundy, Paul, and Dismuke, "Specification and Verification of the RMTP Protocol". Submitted for publication, 1996.

Lundy and Tipici, "Specification and Analysis of the SNR High Speed Transport Protocol." *IEEE/ACM Transactions on Networking*, October 1994.

Lundy and Basaran, "Automated Generation of Protocol Test Sequences from Formal Specifications." International Conference on Network Protocols, October 1994.

Lundy, "Specification and Analysis of a Composition of Protocols." *Information Sciences*, June 1993.

Lundy and Bulbul, "Mushroom: a program for the automated verification of an SCM protocol specification." International Conference on Network Protocols, October 1993.