Foundations of the Digital Wireless World

Prof. Andrew J. Viterbi

Abstract

This exposition for non-specialists presents one perspective on the history of digital wireless from Maxwell to mobile multi-media. The relationships among three major contributors to this evolution, information theory, satellite communication and solid-state circuit integration, are explored. The impact of both source coding and channel coding are highlighted, followed by a brief review of the spread spectrum technology of 3rd Generation (3G) mobile networks.