FDIC Call for Papers 2003

Bruce W. McPherson
484 Peach Leaf Ct.
Odenton, MD 21113
(W) 410-712-6508
Bruce.mcpherson@motorola.com

Title: Vehicular Repeaters in Fire/EMS Communications

Abstract

The Fire Service, including Emergency Medical Services is faced with a set of unique challenges in conducting emergency communications. Although vast strides have been made in the development of advanced technology digital wide-area communications systems, the most important requirement of emergency communications systems is their ability to cover the entire service area, including reaching deep into buildings where critical operations must be conducted. The firefighter who is wearing full turnout gear and breathing apparatus that finds himself in trouble must be assured that he can call for help and be heard. The EMT or paramedic who needs additional help or medical consultation from within a building must be able to get it quickly without having to change location. Those in the business of saving lives and property deserve to be fully protected.

While many of today's public safety communications systems provide a high level of building penetration to support handheld portable radios, distance to repeater sites and other obstructions may limit their effectiveness. In addition, many communities cannot afford the expensive infrastructure required to support communications systems that can at once support both wide area coverage over an entire city or county, but can also provide reliable portable radio communications within the wide variety of buildings within the community.

This paper will examine the use of vehicular repeater technology to provide reliable in-building communications and enhanced interoperability at the scene of emergency operations and will consider their integration with the Incident Command System. No specific brands, models or operational protocols will be espoused.

Author Profile

The author has over 20 years experience in public safety communications. He is presently a Senior Staff Systems Engineer with Motorola in Hanover, Maryland, where he designs public safety communications systems and mentors junior engineers. He was previously a public safety communications consultant with RCC Consultants, Inc. He is the author of several technical papers and presentations for APCO and IMSA. He is serving on a Motorola Fire Communications Task Force developing a communications decision guide for the Fire Service. He holds FCC Commercial and Amateur radio licenses. He is a Lieutenant Colonel in the Signal Corps in the US Army Reserve.

He is also serving as a volunteer firefighter & EMT in Anne Arundel County, Maryland for the last 10 years, and is presently designing a new digital trunking system for the county. He lives in Odenton, Maryland.