APCO REPORTS

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Recent developments at the Federal Communications Commission suggest that public safety agencies contemplating modification or expansion of existing 2 GHz microwave networks should consider filing applications for those changes as soon as possible, according to APCO's Legal Counsel Memo by Robert M. Gurss of Wilkes, Artis, Hedrick & Lane. Gurss said that all current and potential state and local government microwave users should educate themselves as to the FCC's pending reallocation proposals and what those proposals might mean to their present and future radio communications operations.

The FCC issued a proposal in February to reallocate the 2 GHz microwave bands for new emerging technologies (ET Docket 92-9). However, in a major victory for public safety, the Commission's proposal would "grandfather" existing state and local government licensees in those bands. In contrast, utilities, railroads and other private users may eventually have to be relocated. The FCC also imposed a partial freeze on all 2 GHz applications pending a final decision in the proceeding. Under the freeze, microwave applications filed after January 16, 1992, will be granted only on a "conditional secondary basis," meaning that they may be subject to displacement in the future by new "primary" users of the band. Initially, the freeze also applied to applications for modification or expansion of pre-existing microwave systems.

On May 14, the Commission issued an important revision to the freeze, limiting it to applications for entirely new systems. The Commission stated the application for additional links to existing microwave communications networks of "new facilities and/or frequencies" that "are operationally connected to" existing microwave systems will continued to be granted on a primary basis, at least until ET Docket 92-9 is resolved. Note that applicants must make a valid showing of their need for the new facilities. The Commission also said that modifications to existing facilities would be granted on a primary, rather than conditionally secondary, basis.

Note that there is a danger that once the Commission issues a final decision in ET Docket 92-9 regarding 2 GHz, it may decide not to accept any further microwave applications for the band, except on a secondary basis. Therefore, any public safety agencies planning additions or modifications to existing 2 GHz systems should consider filing their applications now while those applications are still eligible for grant on a primary basis. Existing 2 GHz licensees should also be aware that the FCC's proposal would allow new (non-microwave) users of the band to "buy out" current microwave licensees (including "grandfathered" state and local governments). The buy-out price would presumably cover the cost of moving the existing user to alternative frequency bands (though the Commission's proposal would allow the price to be negotiated).

Some microwave licensees might be approached by entrepreneurs during the next several months who may express interest in "buying" their microwave frequencies. Licensees in that situation should proceed with extreme caution, preferably with the advice of counsel. First, they should be aware that the FCC's

proposal is just that, a proposal, and is subject to change. Furthermore, there may be no alternative frequencies available in some areas. Licensees must also be careful to ensure that (a) the alternatives will provide the same level of service, (b) the buyer will and is able to pay all of the costs of the move, and (c) there will be no disruption in vital public safety communications operations. A seminar on these and related private microwave issues will be held at the APCO Annual Conference in Seattle on August 10. For further information, call Robert M. Gurss at 202-457-7329.

APCO ANNUAL CONFERENCE PROGRAM, KEYNOTE SPEAKER ANNOUNCED: A program offering more than 100 presentations is in place, the keynote speaker has been announced and a few other details are being finalized in preparation for the opening August 9 of the 58th APCO Public Safety Communications Conference & Exposition in Seattle. Retired United Airlines Capt. Al Haynes will be the keynote speaker at the Opening Breakfast August 10. He piloted the ill-fated jumbo jet that lost its hydraulics in mid-flight and was making an emergency landing at Sioux City, Iowa, airport in July 1989 when the DC-10's wing clipped the ground cartwheeling the plane into a fiery crash. Captain Haynes and the flight crew were cited for heroics in keeping the plane aloft and getting it to the airport.

The more than 100 seminars, panel discussions and other educational presentations are about 35 more than have been offered at recent Annual Conferences. The program is organized into tracks for topics such as management, telecommunicators, training, technical and 9-1-1. APCO's Northwest Chapter will host the Conference, which includes the annual meeting of the 9,000-member international association, and the elections of officers to serve until the 1993 Annual Conference & Exposition in New Orleans. The following is a list of seminars, panel discussions and other educational presentations scheduled for the week-long Conference & Exposition:

Creating a Stress-Free Environment Through Facility Design Management
Communications during times of disaster are mandatory. A dynamic and efficient facility will foster communication in a time of extreme stress for communications professionals. Types of facilities, facility program needs and solutions will be discussed.

New News in 9-1-1 Panel
The APCO 9-1-1 Emergency Number Committee will discuss the latest trends, news and concerns of 9-1-1 administrators. There will be a question-and-answer session for the audience.

How Communications Can Benefit From New Computer Technology
Significant new computer trends will be explored with the major aim to show practical benefits to public safety communications via a computer-aided dispatch system. Major topics of the presentation will include new price and performance trends that now make new computer features affordable.

Advanced Vehicle Locator Technology
Advanced vehicle locator technology will be explored including how this technology can enhance the department's ability to apprehend the vehicle thief, provide additional safeguards for officer protection and increase the overall efficiency of field operations.Preparing for the Worst Scenario

Using TIGER Files For 9-1-1 Geographic Data Bases
Public safety agencies using computer-aided dispatch systems require a geographic data base for address verification. The creation of a geo-data base is a time-consuming task requiring hundreds of hours of work. In 1990, the U.S. Census Bureau released its final version of a complete digitized street, highway, physical-feature coded set of files named TIGER (Topologically Integrated Geographic Encoding and Referencing).

What Is New in 9-1-1 Legislation
This presentation will deal with new legislation that has been enacted in the State of Michigan. What is unique about the legislation is that it provides a surcharge or tax to be placed on the telephone bills to

provide not only networking charges for 9-1-1, but also for equipment and personnel. This presentation will take you through a step-by-step process that was done in implementing or getting sponsors for this legislation and also some of the problems associated with this legislation.

Maintenance of a Communications Site
The maintenance of a microwave communications system is often overlooked. "If it works, don't fix it" seems to be the attitude. However, a comprehensive inspection program is your ticket to continued coverage. The maintenance program covers routine bolt tightening, re-taping of grounding kits and other small non-critical items. At the same time, a list of action items is generated for your review. This gives you time to plan for the repairs and budget the necessary money.

Emergency Vehicle Tracking Using a Global Positioning System
Emergency vehicle tracking is important for public safety agencies. With a CAD system, the telecommunicator's knowledge of officer location is based on the last communication from the officer. Using the Global Positioning System, which is a Department of Defense satellite system for providing navigation information, would enable CAD dispatch operations to visually track units on a map display with officer/unit location information known at all times.

Critical Success Factors in CAD Systems
A critical factor in many CAD installations today is the ability to link to systems outside the communications center. These external interfaces — to Enhanced 9-1-1, geographic systems, message switches, paging systems and field devices such as MDTs and AVL — are becoming major factors in a successful integrated system. This seminar explores the issues and concerns found in implementing an integrated CAD system and discusses how other agencies have succeeded in bringing these systems on-line.

An Overview of MDTs, PC Laptops and Pen-Based Systems
Computer technology over the past few years has been changing very rapidly and has had a major impact on public safety. This session will explore the latest MDT, laptop and pen-based computers and will outline the features, limitations and costs of these three different technologies.

Reducing Turnover Through Enhanced Employee Selection
This will outline an enhanced selection process designed to legally and effectively find the right person for the job and reduce high, early turnover levels. It will concentrate on the essential requirements of a telecommunicator or dispatcher position and relate those requirements to screening and interviewing methods which centers can use to effectively identify those characteristics, skills and abilities in telecommunicator candidates.

Understanding Cavities, Isolators and Transmission Lines
This presentation will be at the technician's level specifically addressing problems commonly found in mis-tuned devices, failed lines, bad antennas and the like. Often isolators fail without knowing why. You're on the mountain top only to find the newly delivered duplexer does not meet specifications. "What do you do?" will be explained.

New Technology to Increase Usage of Existing RF Installations
This presentation will address the development, innovations and construction of technology which allows an increased usage of existing RF installations.

Data and Voice on a Trunked System
This discussion will cover the capabilities and limitations of integrating voice and data on a trunked system. Guidelines and trade-offs will be noted and explained. This talk will also touch on the effects digital radio will have on a voice and data environment.

Planning a Digital Migration Strategy
Like most revolutionary technology, digital radio systems will not be compatible with existing radio systems. Since most users will not be in a position to scrap their present systems and purchase all new digital systems, a graceful means of transition must be considered. Fortunately, there are migration options available which will allow a gradual transition to a full digital radio system while maintaining all present capabilities in the process.

Integrated Management Systems and Performance-Based Instruction
Communications organization, management and administration will be discussed from the perspective of an integrated management system, including various management methodologies. Performance-based instruction and the integration of performance-based instruction with an integrated management system also will be addressed.

Designing an Ergonomic Communications Center: A Manager's Approach
There are several issues which must be resolved in every emergency communications center for it to be successful in the 21st century. Practical solutions to several of these issues will be presented with illustrations and handouts.

Computer Communications: Breaking the Language Barrier
This will introduce new technologies that provide retention of current investments in hardware and software, relieve transaction volumes on existing CAD systems and easily communicate with virtually any other computer system.

Introduction to GPS Vehicle Location
The public safety community has long recognized that automatic location information can improve officer safety while increasing efficiency. With the advent of Global Positioning Satellites (GPS), a new leap has been made in the availability and accuracy of vehicle location. Most of the satellites already are in orbit and the full system is expected to be in place within a year of the Seattle conference. As equipment costs go down, this technology is quickly becoming a realistic opportunity for many agencies, both for fleet tracking and for on-board navigation.

Management Decision-Making: Doing It Right the First Time
This will address the importance of decision-making in any endeavor. It starts by assuring the people attending that they are constantly making decisions of which they are unaware. Also covered will be the decision-making process, bureaucratic decision-making, snap decision-making, decision-making flaws and decision myths.

System Integration Methodology for Complex Projects
As the typical public safety agency increases the number and complexity of its operational systems, the implementation of such projects also increases in complexity. A typical new or renovated PSAP project may contain many subsystems. No one vendor can manufacture all of these subsystems so the user agency is then faced with a decision to either develop many RFPs and manage the schedule of many contracts itself or to look at the "System Integration" Methodology to execute the project. This session will focus on defining the use of a system integrator and looking at the advantages and disadvantages.

Specialized Mobile Data Applications
This will address a number of new and evolving data applications for public safety operations. Vehicle location, magnetic strip readers and various applications involving imaging in a mobile RF environment will be discussed. Breadth of topics will cover current applications and future enhancements as the technologies evolve.

New Technology In Communications Recording
As digital recording brings with it a wealth of possibilities in utilization and advantages, it also brings with

it a need for communications personnel to understand the full implications of making a digital decision. This presentation will provide a technical view of what digital technology can do as well as its advantages and operational characteristics.

An Introduction to Digital Radio Technology
This will cover the basic concepts of digital radio technology — what it is, the different types and what it can do to improve communications. This "nuts and bolts" session will explain how digital radio technology will be applied in the future of two-way radio communications.

Alarm Enforcement Procedure
This presentation will show how the imposition of financial user fees can minimize the number of false alarms. Issues to be discussed include ordinance provision, false alarm fee enforcement and delinquent fee collection.

Effective Use of a Communications Management System
This will discuss the development and implementation of a PC-based communications management system, including equipment management and tracking, cost analysis, and inventory management.

Advanced Digital Communications Systems for Public Safety
This will cover advanced topics on new digital radio systems for public safety radio. Vital public safety features will be presented. An update on the access method, modulation technique and vocoders for digital communications systems will be included. Data rate and data frame parameters will be discussed. New useful features improving the operation of mobile and portable radios in both trunked and non-trunked public safety radio systems will be presented.

Experiences of Public Safety Departments in Use of Pen-Based Computers
The technology and the individual and collective experiences (both successes and failures) of public safety departments in implementing pen-based computers as field data collection devices and as MDTs will be discussed. Issues of design, cost justification, user training and user acceptance will be explored.

Mobile Data in a Wide-Area, Trunked Radio Network
This will focus on mobile data in a wide-area, trunked-radio network. Particular emphasis will be placed on the evolution of the mobile terminal, the progression of technology needed to allow wired and wireless networks to co-exist, the customer benefits derived from the entry of "large-scale" integrators into the mobile data marketplace and the evolving services available in an integrated voice/data system.

Planning Secrecy Access Control Systems
A plan for controlling access to communications centers, including how to design and build a system, will be presented. The steps which must be undertaken in order to conduct a thorough analysis are outlined and, when completed, will provide the information necessary to either make an effective product selection or hire a qualified consultant.

AEGIS Digital Technology
This presentation will focus on the application of digital speech technology and the method of upgrading existing APCO 16 trunking systems to support digital voice. The speaker will outline the initial phase of migration from today's analog voice systems to digital voice.

VHS Analog Logging Technology
Information will be presented on VHS analog logging technology which allows the emergency services to access recorded information faster, easier and storage is reduced to one-third the size.

Planned Failure Prevention
The design, RFP development, vendor selection and installation of today's computerized public safety

systems is a difficult and time-consuming process. Many such projects are doomed to public controversy and sometimes failure if not developed with some simple processes in place. This session will be a candid discussion of issues that cause system defaults and simple quality control disciplines to ensure that purchaser and vendor are protected from another "planned failure."

Mapping Systems for Communications Centers
This session will present the integration of mapping information and computer-aided dispatch. Included will be an overview of how graphical information has been used in the past, along with explanations of new available technologies. Discussion also will include the advantages of integrating graphical information with other systems and how agencies can be more efficient by getting away from loosely coupled multi-vendor systems and using tightly integrated single-vendor systems.

Alarm Problems and Solutions
This panel will look at the problems false alarms create and the importance of automating the requests for response that PSAPs receive from central station alarm companies so that errors can be eliminated, response service can be improved and alarm system abusers and mis-users can be identified and tracked.

Project Management: From Dream to Reality
The design and construction of a radio transmitter site project requires careful orchestration, especially when it is your primary transmitter location that you are replacing. Research done during the development of the request for proposal and scope of work will pay off in terms of selection of a well-qualified consultant for your project and a successful, high-quality project.

Designing for Dependability in Public Safety Communications Systems
This will deal with the aspects of dependability as they relate to public safety communications: availability, reliability, maintainability and survivability.

Understanding Antennas for VHF/UHF
This subject matter will be addressed at the non-technical level showing the basic antenna principles of gain, radiation of single conductor and impedance characteristics.

Computer Maps and CAD
The need for electronic maps in computer-aided dispatch systems is ever-increasing as dispatch managers and fleet managers see the reduced response time and cost benefits of this technology. Installations in EMS, fire and police departments around the United States using computer maps with CAD will be presented as case studies.

Propagation Constraints Comparing VHF to UHF and VHF/UHF to 800 MHz Trunking
A simple approach demonstrating propagation limits of each spectrum, losses incumbered and why additional equipment is needed when one converts to the higher bands for communication needs.

Multi-Agency, Multi-Jurisdictional Communications Centers
This will discuss technological advances that improve development of multi-agency, multi-jurisdictional communications centers. Information will be presented on the organizational structures involved in planning these types of centers and how technological advances have improved the integration of these systems.

Developing and Implementing a Public Safety Mobile Data System
Mobile data is currently on the minds of many public safety organizations to achieve various objectives from spectrum and dispatch center relief to expediting information transfer and real-time field decision support. The technology needed to achieve these objectives is varied and rarely available for review at RFP preparation time. This session will provide communications professionals with this information.

Fully Integrated Communications Center Workstations
The communications center environment increasingly includes several systems and tools to assist the public safety communications professionals in performing their work. This presentation will focus on what some of these systems are and the advantages, necessity and synergy of fully integrating them into a seamless public safety communications tool. Specific topics discussed will be integration of telephone, Enhanced 9-1-1, CAD, console radio functions, TDD, AVL, electronic mapping alarms, video, security and others.

Using Antenna Patterns to Get the Desired System Coverage
This will discuss using antenna patterns to get the desired system coverage, including using downtilt to increase close-in coverage and reduce co-channel interference. Also discussed will be how side mounting affects patterns and using this to increase system performance as well as how to achieve omni patterns with distinct coverage advantages by side mounting on very large structures.

Non-Ionizing Electromagnetic Radiation
This presentation will cover potential electromagnetic field exposure problems associated with specific installations, measurement procedures and instrumentation and the difficulties of predicting or measuring multiple signals with varying duty cycles, worst-case exposure calculations and assessment using EPA and FCC methodologies, significance and impact of new ANSI C95.1-1992 exposure and contact current limitations upon transmission sites, similarities and differences of new ANSI standards and recently adopted city, state and county standards, and future trends in exposure limitations and research.

ADA and Its Impact
This presentation will provide a clear outline of the new legislation call the Americans with Disabilities Act (ADA) and its impact on the public sector's employment practices and procedures. A clear outline of the regulations under Title I and Title II of the Americans with Disabilities legislation will be provided as well as a discussion concerning how agencies can comply with ADA regulations and reduce charges of discrimination under the act's provisions.

Fire Station Alerting Systems for Advanced Dispatch Control and Monitoring
Modern fire station signalling equipment must exhibit many features to best help fire departments perform efficient fire and EMS dispatching. This presentation will discuss functions required to help meet National Fire Protection Association dispatch recommendations. Other operational considerations will be discussed along with the importance of the equipment being user-configurable. Installation requirements of fire station alerting equipment will be discussed.

9-1-1 TSP Update
The presentation will include an overview of the newly adopted federal program that allows, based on a subscription rate, for telecommunications service priority (TSP restoration treatment. TSP replaces the old federal Restoration Priority (RP) program that related to federal telecommunications circuits and broadens the scope of the program to include state and local governments. The presentation will include an overview of the national concerns that have been presented to the TSP Oversight Committee and current resolutions to those issues.

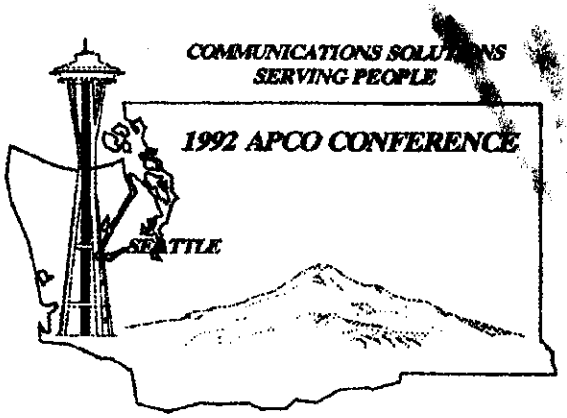
Organizational and Operational Effects of Implementing an 800 MHz Trunked System
This presentation will describe the common organizational and operational effects of implementing an 800 MHz trunked radio system. The purpose of this is to help the attendees avoid some of the problems associated with the planning, implementation and operation of these systems.

IF YOU ARE NOT AN APCO MEMBER, YOU CAN OBTAIN A CONFERENCE ATTENDEE INFORMATION PACKAGE BY CALLING THE CONFERENCE DEPARTMENT AT 800-824-1850. THE PACKAGE IS BEING MAILED TO ALL APCO MEMBERS. MORE THAN 175 COMPANIES WILL EXHIBIT THEIR GOODS AND SERVICES IN 370 BOOTHS. IF YOU WOULD LIKE TO JOIN THEM, CALL 800-824-1850 FOR EXHIBIT BOOTH SPACE RESERVATIONS.

The Northwest Chapter of APCO
Cordially Invites You to Attend the

58th APCO Public Safety Communications Conference & Exposition

August 9 - 14
Seattle, Washington



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