2015 WRC Session Descriptions

Title	Description	Instructor	Track
¡Ay! Caramba! Understanding Language and Cultural Barriers on 911 Calls	This highly interactive presentation provides insights from a survey of 9-1-1 interpreters representing 46 languages. Course materials highlight the most common language and cultural issues that complicate 9-1-1 calls, like getting to the point, fear of authorities, determining addresses, and others. The presentation addresses cultural issues at play on calls and offers PSAP personnel strategies to work through issues that arise. The discussion also touches up essential tips to team more effectively with interpreters during emergencies.	Manny Solis	Front Line Operators
Ahh In the News: Keeping Your 911 Center out of the Headlines	This session was originally showcased as a featured session at the 2014 NENA National Conference. Spend an information packed session that shows "foreseeable" failures within the 9-1-1 industry and your dispatch center. This is a great session to see what will put you on the front page of the paper or the first story on the evening news.	Kevin Willet	Front Line Operators
APCO ProCHRT Update		Lynn Bowler	Front Line Operators
Cyber Security and the PSAP	You hear about security bewaches at companies like Target, but what happens when hackers keep your dispatch center from funstioning with a denial of service attack? What happens when your reverse 911 system is hacked and sends out bogus alerts? During this session, potential dangers will be discussed, as well as applicable Federal and State laws which will your daily duties.	Alan Tilles	Front Line Operators
Dispatcher Role in Delirium	Although "Excited Delirium" is not a new phenomenon, most dispatchers have never heard of it and don't have any idea about how their questioning and "scene setting" can save lives. Many dispatchers have probably handled excited delirium cases, but did not know it - this class will introduce the definition of excited delirium and how specific symptoms can assist public safety with sending appropriate resources (law enforcement and paramedics) in order to save a life.	Leslie Whitham	Front Line Operators

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Domestic Violence	Four women are killed each day and several law enforcement officers are killed each year as a result of domestic violence! This session provides call takers and dispatchers with a better understanding of domestic violence and how prevalent it is. As the first line of help, we save lives each day! Attendees will leave with better questioning techniques, dispatching skills, and resources to help every day.	Andrew Trygg	Front Line Operators
Excited Delirium	How many times have you heard the words "bath salts", "spice" and "in custody death". This session will show the dangers of each call type and the role that a 9-1-1 call taker or dispatcher has in such events. The session is supplemented by current events in the news and special responder safety issues.	Kevin Willet	Front Line Operators
Frequencies to Failures: The Fundamentals of Radio and Systems	The fundamentals of radio are explored in a creative and insightful way starting with frequency/wavelength, modulation, basics of simplex, repeaters, and systems, and finally a case study of the Sacramento Regional Radio Communications System, coverage maps, and SmartZone system failure modes.	Chuck Schuler	Front Line Operators
Games Trainers Play	Ask any dispatcher and they'll tell you at some point in their training process they were absolutely bored with the process. While they patiently waited for their trainer to "run them through another unrealistic scenario" hours and hours of valuable training time was wasted. In this dynamic, fun and hands on session, attendees will be challenged to think outside the box and start making training fun! Whether it's a crossword puzzle or a game, we MUST engage our trainee's and keep their attention. Let's wake up your training program!	Andrew Trygg	Front Line Operators
Health & Wellness in the Dispatch Center: Developing a Culture of Movement in the Workplace	Are you sitting… it may be killing you? By now you may have heard about the 'perils of sitting' or how 'sitting is the new smoking.' Recent research findings link extended periods of sitting with chronic conditions like diabetes, heart disease, and death risk. The sedentary world we work in has created a whole new level of challenges in keeping us healthy and happy. In this presentation, become familiar with the academic research behind this popular topic – particularly the concept of "NEAT" – and learn strategies for the Dispatch Center that promote a culture of movement in the workplace.	Quint Andrae	Front Line Operators
It's Your Ship		Kevin Willet	Front Line Operators

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Multi-Cultural Considerations for the 911 Call Taker	As communities become more culturally diverse, so too are the demands for cultural awareness in emergency services, especially on the front lines of a 9-1-1 center. Using Hofstede & Hofstede's "Five Dimensions of Culture" as a model, this interactive session will use examples and activities to illustrate a standard of cultural understanding that is specific to the 9-1-1 industry and provides specific strategies for successful communication	Brianne Nelson	Front Line Operators
Offering Sincere Service	Remember when you first started this job? When all you wanted to do was the "help people"? It doesn't take long to lose that loving feeling. You will spend an hour rekindling the spirit to serve. Discuss how providing high quality service benefits the citizens and field responders, as well as every dispatcher or call taker in the organization. It's easy to be negative, but maintaining a service-centered mind set creates an environment that celebrates success and doesn't allow the C- dispatcher to take center stage.	Leslie Whitham	Front Line Operators
Quantifying & Legitimizing Stress in the 9-1-1 Workplace	Receive insight into the most recent studies on dispatcher stress and surprising findings on the root causes of the major stressors for 9-1-1 staffers. We will need to go beyond deep breathing exercises to meet the challenges as our industry moves into Next Gen 9-1-1. A deep dive into how we identify employee issues and take steps to improve internal transparency and policy will change the way we do business on a personal and organizational level and help our centers prepare for whatever the future brings.	Kim Turner	Front Line Operators
Radio System Troubleshooting for Dispatchers	The only point of contact that most dispatchers have with their agency's radio system is their console. Behind each screen icon there is a whole lot of equipment that connects their radio console with the mobile and portable radios in the field. Without getting into excessive electronic details, this presentation will explain how radio systems work, the names of the various parts, and basic troubleshooting concepts. The goal of the presentation is to give the dispatchers enough knowledge about their radio system that they can help their technical staff resolve radio system problems as quickly as possible.	Bill Ruck	Front Line Operators
Stress Reduction in the 911 Dispatch Center	I was a 911 Operator for the LAPD for 10 years, spending most of those years stressed and miserable. Then I found a way out. I created a stress reduction program for my fellow coworkers at the 911 Dispatch Center and over 100 dispatchers came through it.	Adam Timm	Front Line Operators

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Teaching Critical Thinking	This will be an interactive training exercise where you will learn how incredibly important critical thinking is in our profession. You will know what it means to *USE* critical thinking and how to break down the problem-solving mental process.	Sue Pivetta	Front Line Operators
The Suicidal Caller	Statistics on Suicides. Discuss mental illness, PTSD. We'll also discuss suicide by cop and officer suicide. We will discuss taking care of ourselves after very difficult calls	Kelli Bedway	Front Line Operators
Uh Oh! The System (Radio, 911, CAD) Crashed: Now What?	This course is a facilitated discussion designed for first line supervisors and managers in communications centers. The discussion will focus on proactively planning for failures in mission critical technologies such as radio, CAD, and/or telephone systems, and emphasizes the importance of developing and maintaining clear procedures and facilitating routine testing of back-up/failure procedures to ensure continuity of operations during pre-planned system shut-downs or unscheduled system failures.	LaTonya McDaniel / Katie Braverman	Front Line Operators
Understanding POST	This workshop provides insights about the California Commission on Peace Officer Standards and Training P.O.S.T.) - how they operate and now they are working to improve relationships with public safety dispatchers and dispatcher training. Join us to have your questions answered and see what POST is doing that you can benefit from.	Rosanna McKinney	Front Line Operators
Up For Grabs! New Incident Intelligence Tools	Commercial technologies improve daily and can provide data previously unavailable to PSAPs. Relevant and timely information about people, places, and property is just as important to a responder's safety as a firearm or radio. Join this session to learn how current technology provides tools for creating greater situational awareness. Discover how incident intelligence tools are giving PSAPs and first responders access to billions of commercial data records such as vehicle ownership, permits, property records, relatives, cell phone numbers, purchases, Internet and social media activities.	Jerry Pope	Front Line Operators

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We Can Do Better	Do you ever feel like you are "chasing your tail" some days and never making progress? Don't miss this session that is packed with realistic time management tools, new and exciting ideas on how to prioritize and a fantastic dose of motivation. You will be excited to return to the office and implement the ideas that Kevin shares with you. You will find your stride after attending this class. You will also learn of some available resources that will save you money and better yet, save you time!	Kevin Willet	Front Line Operators
What if it Were Family?	The premise of "what if it were family" is an all new idea that may revolutionize service levels within the 9-1-1 industry. You will be guided through the mind changing ideas and real life examples on how any agency can implement improved call taking skills and tools that will increase responder safety, improve customer satisfaction, and decrease citizen complaints. This session is a "game changer" don't miss it!	Kevin Willet	Front Line Operators
Work Shifts: Are PSAPs Putting the Public at Risk With Less Than Optimal Shift Assignments?	PSAP managers frequently create work shifts based on the convenience of the organization and/or the preferences of their employees. However, research studies suggest that some types of shifts (such as rotating and/or 12-hour shifts) could result in potentially harmful outcomes for the public the PSAPs' serve. This session explores scientific research associated with a variety of work shifts, including potential hazards to the public that might be associated with rotating shifts and shifts lasting longer than 10 hours.	Jim Kuthy	Front Line Operators
ABC's of Supervision	Being *A*ccountable, *B*alanced and *C*ommitted takes practice. Many supervisors feel like they are pulled in 100 different directions from the time the step foot in the Communications Center. Come learn how to prioritize, hold your staff accountable, and be committed to each of their successes while managing a high functioning and professional 9-1-1 Center. Discuss challenges and expectations with peer supervisors and develop strategies to utilize at work upon your return.	Leslie Whitham	Supervisory / Management

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Advancements in Wireless Location Accuracy: Outdoors/Indoors X/Y/Z	Today, a majority of 9-1-1 calls are coming from mobile devices; it stands to reason that a majority of those calls would be coming from indoor locations. The FCC has seen this change and is considering implementing standards that would require carriers to improve the location they provide to public safety for indoor 9-1-1 calls. This session will explore both existing and emerging technologies that may assist first responders in more accurately identifying caller locations. The instructor will discuss the capabilities of a system that can pinpoint caller locations – indoor and outdoor – and the differences between them.	John Snapp	Supervisory / Management
Applying Big Data Techniques to Improve Public Safety	Harnessing the power of predictive analytics will provide actionable information to improve public safety. This session will provide attendees a better understanding of use cases and the steps necessary to realize the potential of big data.	Stephen Ashurkoff	Supervisory / Management
Automated Secure Alarm Protocol (ASAP to the PSAP)	The ASAP program continues to expand beyond implementations in Washington DC, Houston TX, Tempe AZ, Richmond VA, and other localities. Learn about PSAPs, CAD providers, and alarm companies that joined the project recently, along with additional alarm companies that have contracted to participate. Attendees will be updated on project outcomes, see a new ASAP testimonial video and witness a LIVE demo. Participants will hear how the program helps reduce 9-1-1 processing and response times to alarm events by as much as three minutes, while eliminating mistakes, miscommunications, and telephone calls between alarm monitoring companies and 9-1-1 PSAPs.	Bill Hobgood	Supervisory / Management
Beyond Stress Management: The "Real" Problem	This is a 2 part session. Impacts of stress must become a primary focus of every 9-1-1 center. Part 1 of this training introduces a new approach to the problem that impacts recruitment, retention, and relationships. It also provides some understanding about how the issues of stress affect us. Would you: Give trainees a tool to help them from Day One? Help employees build coping skills for low frequency/high impact incidents? Give all employees some armor against constant change? Part 2 of this training continues the conversation about a new approach to the problem that impacts PSAP recruitment, retention, and relationships. After a brief review about how stress affects us, we will dive into the different types of approaches available for mitigating those impacts based on the way an individual responds to stress and to the type of stress the individual is experiencing. (2 days, 1 hour each)	Lisa Turley	Supervisory / Management

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Can they Multi-Task, Determining Whether Your Job Applicants Can Multitask	PSAP managers are often frustrated with dispatcher/call taker job applicants who respond during a test or interview as if they would be ideal candidates, but who then have difficulty performing job-related multitasking (performing two or more tasks at the same time) during training and/or when performing the job. This presentation will examine the latest findings in the psychological literature about multitasking, as well as presenting methods that can be used to potentially determine whether applicants possess the ability to successfully perform more than one job-related task at a time.	Jim Kuthy	Supervisory / Management
Communications Center Staffing Models: One Size Does NOT Fit All	Identifying optimal communications center staffing is a challenge made easier by the emergence of generic staffing models requiring minimal inputs. However, does one model fit all? Our experience shows that, no, one size does not fit all; reliance on standard models overlooking factors unique to individual communications centers operations results in over or underestimating optimal staffing. This presentation identifies staffing configurations and introduces overlooked factors that can be accommodated in models to estimate optimal staffing. We present a work plan to assist leadership gather information to develop a model analyzing staffing for current and future operations.	Michael Galvin / Monica Lynn	Supervisory / Management
Conquer Stress for Enhanced Productivity and Increased Wellness	Stress is a killer in our society, accounting for 60-80% of all doctor's visits. Dispatch staff is facing more and more stress every day. Learn cutting edge techniques like meditation, mindfulness, and visualization to stop stress during your workday for increased performance and better health. Discover how simple techniques like meditation, visualization, mindfulness, and affirmations can help improve cognitive function, memory, immune system, and job performance. These are easy to incorporate into everyday life and can be used immediately for stress reduction. Hands-on demonstrations and audience participation round out this fabulous workshop.	Kathy Gruver	Supervisory / Management
Cyber Security Considerations When Implementing NG911	Effective cyber security measures begin with careful planning during the design phases of NG9-1-1 solutions and continue with proactive monitoring after service cutover. This session provides an overview of cyber security best practices for next generation 9-1-1 implementations.	Stephen Ashurkoff	Supervisory / Management

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Earthquake Early Warnings	The objective of an earthquake early warning system is to rapidly detect the initiation of an earthquake, estimate the level of ground shaking intensity to be expected, and issue a warning before significant ground shaking starts. A network of USGS seismic sensors detects the first energy to radiate from an earthquake, the P-wave energy, and the location and the magnitude of the earthquake is rapidly determined.Warnings will be distributed to local and state public emergency response officials, critical infrastructure, private businesses, and the public.	Panel: Josh Bashioum / USGS / Caltech	Supervisory / Management
Evolution vs Forklift Upgrades	Open standards provide a way to evolve emergency services networks instead of forklifting upgrades as new technologies emerge. This is even more important considering the different kinds of media being used including voice, text and video. Learn how open standards can provide a foundation for providing next generation 9-1-1 systems.	Thomas Sammons	Supervisory / Management
FCC 106 and You!	A nationwide programmatic agreement governs the historic preservation review requirements for new tower construction and collocation projects under Section 106 of the National Historic Preservation Act. The purpose of the agreement is to take into account a project's potential effects on historic properties prior to agency approval. Andrew Pulcheon, Cultural Resources Manager at LSA Associates, Inc., an environmental consulting firm with nine offices in California, will provide a general summary of the process required to comply with the programmatic agreement and will offer suggestions for applicants to streamline agency review.	Andrew Pulcheon	Supervisory / Management
FCC 601 Process	This course offers the attendees a general overview of the Federal Communications Commission (FCC) licensing process, including limited information on frequency coordination.	Pres Thomson / APCO AFC	Supervisory / Management

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Federated Architecture	A federated system architecture is an ideal option for large county and statewide deployments who want to maintain independence but have the ability to easily share information with other PSAPs. Super clusters are hardware fault tolerant and geo-diverse and support a configurable number of PSAPs and users, allowing the overall system to support a practically unlimited number of both PSAPs and users. In addition, the federated system has the ability to transfer a substantial amount of call, incident, and unit detail data and historical information. Join us for an information-packed session where attendees will learn about the possibilities, benefits and the impact of a federated architecture model.	Craig Dollar	Supervisory / Management
Fighting Off a Toxic Workplace	We want to affirm the great work of your hard-working 9-1-1 staff member, inspire the "average" staffer and bring the "oh no, that's me" realization to the type A tiger that is slowly killing workplace morale within your team. This class will cover tips on avoiding the Toxic Workplace and offer new tools on how to be overcome and influence change in our sometimes negative environments. Our instructors will put the emphasis on self-evaluation and reflection of your attitude, behavior and performance.	Andrew Trygg	Supervisory / Management
Getting Incident Communications to the Incident: A COML's Experience	The number one item in any after action report is communications and how they did not work. The technology is there so why do these challenges persist? The experiences of this Communications Unit Leader brings to light the capabilities of Mobile Communications Units and also highlights the challenges of getting these resources to the incident when they are needed, early on!	Chuck Schuler	Supervisory / Management
Governance Issues for the Next Generation PSAP	Today, people can communicate in ways that we thought possible only in science fiction. How is this new technology impacting the ways the public calls for help? Whether it's audio, text or video, learn how the next generation 9-1-1 architecture provides a methodology for taking advantage of multimedia.	Thomas Sammons	Supervisory / Management

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Implementing an Asset Management	The County of San Bernardino, Information Services Department , owns and operates a county-wide 700 /800 MHz trunked radio system with approximately 14,000 subscriber units. The legacy asset management system, which was over 20 years old, no longer met the needs of the organization due to limited functionality. The decision was made to pursue a commercial software package that would meet the need for a single solution to manage assets, work orders, billing, and inventory control. In this session we will discuss the selection process, implementation, and conclude with lessons learned.	Doug Roberts / Tim Trager	Supervisory / Management
Intelligence Led Policing (Real Time Crime Centers)	Learn about ways to enable public safety agencies and the tools and solutions needed to empower personnel to move forward into intelligence-led public safety while ensuring that the men and women who serve in those departments have the tools at their disposal to keep them safe by providing the right information and intelligence when they need it the most.	James Wolfinbarger	Supervisory / Management
Multi-Generational Challenges	Today's workforce is the most complex in history; it is better trained, educated, and experienced than ever before. It also brings together four generations of participants, each adding its own unique contributions to the workplace culture. It is this uniqueness, within each generation, which can lead to conflicts and misunderstanding between groups. Ultimately organizations experience increased recruitment challenges, lower productivity, and higher employee turnover. In this interactive session, we will explore the characteristics of each generational group and solicit audience participation to develop strategies for a more cohesive workplace environment.	Doug Roberts	Supervisory / Management
Public Education and Training for Texting to 9-1-1	Texting to 9-1-1 is causing quite a stir among the Public Safety community. When preparing a 9-1-1 Center to accept new types of 9-1-1 calls, there are so many things to plan for and it can seem like an overwhelming task. This presentation will help the public safety agency identify resources available for public education; help with training call takers, and with updating Operating Procedures. It will also provide an overview of current NENA committee work being done related to text-to-9-1-1 public education and dispatcher training.	Sherri Griffith Powell	Supervisory / Management

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Quality Assurance and Improvement (QA/QI) Best Practices	With the new NENA/APCO Quality Assurance and Improvement (QA/QI) standard and the widespread roll-out of new NG9-1-1 initiatives, PSAPs are being held to higher standards and subjected to more scrutiny than ever before. A well-defined and implemented QA/QI program across all forms of communications is becoming more critical than ever. Attend this interactive training session and learn how to: create effective quality assurance forms for call takers and dispatchers; how to find and schedule the best number and type of calls for QA; double your QA evaluators' productivity by automating time-consuming processes.; assure feedback and coaching is delivered in a timely manner for rapid improvement; use speech analytics to uncover trends and improve QA and investigations.	Jeff Visger	Supervisory / Management
Radio Overload	Who doesn't love technology, and the new capabilities it brings us? With License plate readers, crime cameras, CAD mapping and gigabytes of databases, the day to day work of dispatch is changing. But are we asking too much of our radio operators? Do our most basic functions of dispatching calls and maintaining field unit status get lost as we try to manage all the new technology? In this roundtable we will discuss ways to indentify and measure radio dispatcher workload, so we can start to manage it.	Ronald Dunn / Jim Bare	Supervisory / Management
Reducing Noise Complaints About Noise, Glare, and Temp	Staff turn-over, absenteeism, worplace injury, job satisfaction, and performance levels can all be effected by the dispatch environment. They can also be a significant challenge to management staff's ability to maintain quality service to the community. In this presentation staff from Nacht & Lewis Architects and Mazzetti, a national multi-jurisdcitional engineering firm, discuss best-practices in the well tuned Dispatch Environment. The discussion will cover practical, acoustical, lighting and air conditioning approaches to an improved work environment.	Tim Belke / Michael Smith	Supervisory / Management
Resilience in NG911	The importance of reliability in emergency services communications systems cannot be overstated; lives depend on it. Many factors affect resiliency of 9-1-1 services including software, monitoring and cybersecurity. This session provides attendees with information on how the next generation 9-1-1 architecture can provide a blueprint for providing resiliency and security.	Thomas Sammons	Supervisory / Management

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Text to 911 Logging: Are You Ready?	Text-to-9-1-1 is an important NG9-11 milestone. Recent FCC proposals are accelerating the pace toward Text-to-9-1-1. Your PSAP not only needs to be prepared to handle Text-to-9-1-1 communications, it will also need the infrastructure to capture and record them, much as you do 9-1-1 calls today. In this session you'll learn about: the current state of Text-to-9-1-1; why Text-to-9-1-1 logging is essential; different methods for logging Text-to-9-1-1; regional logging solutions for Text-to-9-1-1; the impact of Text-to-9-1-1 on Quality Assurance (QA); what to look for in a Text-to-9-1-1 logging solution.	Joshua Asbill	Supervisory / Management
The Many Wonders of CAD Integration	What's in a CAD system? The instructor will lead attendees through the maze of opportunities available through CAD integration. Features such as auto dispatch, automatic alerts, oblique photometry, embedded call-taking and more will be discussed in this timely presentation. This session will help attendees learn how to optimize CAD features such as auto dispatch, automatic alerts, oblique photometry, embedded call taking to truly make the most of their system.	Paul McLaren	Supervisory / Management
Wrangling Risks in Technology Projects: Lessons From a Colorado Implementation	Managing risks in technology projects improves project outcomes. However, when project teams spread attention across the many tasks involved in implementing technology, risk management becomes an afterthought considered only when the project starts falling apart. This session reviews how one agency successfully controlled project risks while implementing information technology. We share the tool used to identify and assess project risks, as well as how we used the tool to develop cohesion and joint ownership of risk management among project team members. We then discuss how we managed risks as the project progressed, and present lessons learned along the way.	Monica Lynn / Mike Gavin	Supervisory / Management
FirstNet Update - (Western States)	Several Western States have begun the FirstNet consultation process, the first step towards a state plan for Nationwide Public Safety Broadband Network. Our panel will discuss these consultations, our outreach efforts to date, and the future of interoperable communications in the West.	Panel: George Molnar / Kristi Wilde / Steve Noel	Supervisory / Management (FirstNET)

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The Synergy Between NG9-1-1 and FirstNet	FirstNet and NG9-1-1 will transform today's PSAP into tomorrow's Next Generation Command Center, an information hub for big data. Who 's in charge? How will the data stay secure and within policy limits? This panel highlights technology, current projects underway, best practices and Governance models for the Next Generation PSAPs. Are you ready?	Jennifer Hansen / Dr. Walt Magnussen / Amanda Hilliard	Supervisory / Management (FirstNET)
800 MHz Post Rebanding Interference	The rebanding process was created to mitigate interference. Unfortunately, post-rebanding interference is still occurring. Hear straight from licensees, consulting engineers and counsel that have been involved in post-rebanding interference issues, review methodologies to locate and mitigate the interference as well as the rights and responsibilities of licensees in the process.	Alan Tilles	Technical
Advances in Simulcast Testing Methodologies	The limitations of previous simulcast testing/prototyping methodologies are examined and the capabilities of the latest generation of signal generators that allow GPS alone to synchronize multiple transmitters are reviewed. Discover how, with no backhaul or base stations required, to test from completely undeveloped transmit locations. Results from measurements made on a two-site simulcast test system in Yosemite National Park demonstrate the performance of both C4FM and LSM modulation formats in an environment with significant multipath reflections. an extensive non-capture overlap area, and the improvement in system performance that LSM provides where BER performance with C4FM is marginal.	Tom Eckels	Technical
Base Station Receivers, Interference and Desensitization	As today's radio systems include many channels at a given location, the potential for interference increases. Understanding the various potential sources and methods of mitigation are increasingly important. Topics will include: What is intermodulation and how does it affect system performance? How much reserve gain in an amplified multicoupler is too much? How can control stations affect system performance? General site best practices will also be presented.	Bernie Olson	Technical
Between the Walls – Public Safety Coverage (Fire Code-In Building Coverage)	In 2009 both fire code formation bodies, the NFPA and IFC established fire codes that establish standards for the inclusion of public safety radio coverage within buildings. This class will cover some of the technical challenges, as well as define the collaborative efforts needed by both the fire department and communications personnel.	Kevin Persing	Technical

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Bi-Directional Amplifiers to Improve Radio Coverage in Canyons		Eric Dye	Technical
In Building coverage / 700 / SMR	This will be an interactive presentation that discusses the technical challenges faced in today's RF environments. As there are available solutions that can mitigate interference problems it is important to understand the issues for all stake holders that may be involved. This presentation will include the subject of designing around interference mitigation through the proper design of "in building" RF distribution systems that can support users from VHF to 2.5 Gigahertz. Whether or not these systems are designed in a layered approach or on a single integrated platform it is of vital importance that the integrator/engineer understands the interaction between different RF services	Greg Glenn	Technical
Mission Critical GIS Mapping Data in NG911 Environment	GIS map data with accurate location information is a core component for 9-1 -1, and agencies will find that GIS map data has an even more prevalent role in 9-1-1 call taking as they look towards the implementation of NG9- 1-1. However, beyond preparing the GIS data ready for NG9-1-1, agencies must come up with a plan for on-going maintenance, responsibilities for maintaining the data, and processes for determining that a quality GIS map data set has been developed. Attendees will hear examples of successful planning and implementation, lessons learned, and specific approaches and methods currently being used for maintaining the data.	John Joseph	Technical
Networks are more than Microwave	As public safety applications evolve from LMR to LTE and video surveillance, microwave networks become limited in their ability to fully meet the needs of the public safety community. Leveraging a combination of existing network infrastructures owned by multiple agencies to create a shared IP overlay will enable a budget-constrained public safety community realize the situational awareness needed to be effective in its role. Simplified end-to-end service provisioning and network management along with the ability to create virtual network segmentation are key to ensuring the privacy, security and control needed for public safety applications. As SDN (software defined networking) evolves further, it will enable real time network reconfiguration for enhanced disaster response.	Cherian Abraham	Technical

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Planning for the Known & Unknown in Communications Center Power	Exploring the best practices for designing and upgrading the electrical system for your communications center. Explaining the differences between the many different types of UPS and redundant power systems used in today's best communication centers.	Bruce Bucknell	Technical
RF Filter Design		Eric Dye	Technical
RFP Technical Specs	Identify equipment and services and their cost implications when including them in your RFP. Do you need a radio system replaced? What about a console? Subscribers too? How about backhaul microwave or fiber? Should all these be included? To what extent? Understand the categories that MIGHT be included in your RFP for a replacement radio system, what specific terminology SHOULD be used, and implications of the terms that COULD be used.	Susan Ronning	Technical
Satellite Communications 101	This workshop will focus on basic satellite communications, geosynchronous/geostationary orbit, telephone systems, trunked talk groups and issues you might want t address to fix a potential problem before a disaster. "An ounce of prevention is worth more than an ounce of gold."	Jim Coates	Technical
Tower Work: The Peril of Compromise	When constructing or maintaining communication towers, the first mistake might very well be the last one, too. The first opportunity for a mistake in public safety communications towers is failure to qualify and evaluate who is doing all the crazy stuff way up in the air. The work is not only scary looking, it is fraught with liability for the public sector employee that is not adept and experienced at discerning the subtle differences between competent and confident. This track is designed to take the mystery out of determining what a great contracting partner asset looks like when they are hanging off your tower. Further, how does the documentation process protect the jurisdiction and what does it look like. Your job is to evaluate the qualified; this presentation will assist you in sifting and balancing network performance demands versus the need for site safety. The presenter will teach you unusual tower math like the following formula: Slow = Smooth and Smooth = Fast; So Slow = Fast! Join us as we explore the ground rules of managing the people who spend their lives in the sky!	James Tracy	Technical

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Using SINAD Coverage Mapping to Locate Receiver Blocking	Public safety receivers may be unexpectedly blocked as 4G LTE cell sites are built to support the consumer demand for broadband data. Public safety receiver blocking is difficult to predict as antenna choice and placement is critical and cell site transmit power can vary significantly. This paper describes a method that uses the receivers deployed by the agency to map areas of performance and uncover problem locations. The measurement procedure described uses an existing agency channel and agency radio along with test equipment that provides a Google Earth map of receiver performance.	Tom Brinkoetter	Technical
Vehicular Repeater Systems		Balbir Johl	Technical