

P38 - APCO Project



A Project focused on the Impact of Wireless 9-1-1 Service at the PSAP

8 years of mission driven support to PSAPs

APCO International
Association of Public-Safety Communications Officials - International, Inc.





Project LOCATE

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Letter from the Project Chair



As Chair of APCO Project LOCATE and on behalf of the Project LOCATE Team, I present to the Association of Public-Safety Communications Officials (APCO) International Board of Officers, the APCO Executive Council, and the APCO membership the Final Report of Project LOCATE, (Locate Our Citizens At Times of Emergency) (Project 38) .

The mission of Project LOCATE has always been to represent the membership needs and to advocate on their behalf as it relates to wireless 9-1-1 issues and challenges. To be their voice for how wireless 9-1-1 service impacts their ability to answer and respond to calls for service on wireless devices. That has meant assisting public safety understand technology, managing public and responder expectations, and being the entity that sought to resolve implementation, cost and operational issues created by wireless 9-1-1 on their behalf.

Our focus over the term of this Project has been fluid and has evolved to reflect the needs and the challenges presented by the development of the technology and the implementation of the service. We have addressed issues of cost, call volume, location accuracy performance, management of public and responder expectation, as well as political, implementation and training challenges.

This Final Report summarizes the activities of APCO Project LOCATE (Project 38) over the past eight years. The Report seeks to document LOCATE and APCO's contribution to its members and the public we serve. It further discusses the management products produced by LOCATE for use by our members to assist them to optimize wireless 9-1-1 implementation and call management at the local jurisdiction.

Project LOCATE wishes to thank the many contributors to this Project and its related activities. First, the PSAP Readiness Board, which provided the initial funding for LOCATE's national effort to lead stakeholders to wireless deployment, then ultimately to the APCO Executive Council, the APCO Board of Officers, the Public Safety Foundation of America Board of Directors and the APCO members who shared the vision of Project LOCATE. Without such encouragement and acknowledgement of the value of these efforts, as well as the financial support to obtain the results necessary to achieve the deliverables, LOCATE could not have provided the benefits to our membership through the activities and initiatives over the past eight years.

A special thank you to the Project LOCATE Team members, including staff and subject matter expert consultants, whose unwavering focus demonstrated in this project has been significant. Even though some of the Project membership changed over the course of our activities, each and every member consistently demonstrated that their focus was always on what was of benefit to our members and in doing what was right for public safety and the public as a whole. They have been persistent champions for public safety and their resolve to stand firm on what was right and to develop useful tools to assist public safety professionals to do our jobs more effectively has been a model of support and effort. The APCO membership is truly fortunate to have such dedicated individuals who have worked so diligently on their behalf.

LOCATE's work, your work, is not done. The mission continues. It is incumbent on each and every professional in public safety to continue to monitor the events in the industry; to remain involved and ardent supporters of the causes that are important to you and that affect our profession; to find future champions of our cause; and to rally the leadership and this Association to continue to support the issues that are important to you, the membership.

Thank you for the opportunity to be a small part of a very important Project which has benefitted both the APCO membership and the public at large. The work we did and the awareness we raised as champions of public safety issues related to wireless 9-1-1 has been a significant force and has truly made a difference.

Nancy A. Pollock

Nancy A. Pollock
Chair



Project LOCATE

Executive Summary

As the use of wireless 9-1-1 service was initially expanding across the country, APCO created Project 38, later named Project LOCATE to monitor and study the impact of wireless 9-1-1 on Public Safety Answering Points (PSAPs). Over time an expanded mission was approved and Project LOCATE was charged with seeking appropriate means of facilitating wireless deployment which included assisting PSAPs understand the technology, how to make a valid request for Phase I or II service, improving public awareness as well as seeking to resolve the operational, cost and project management issues created by wireless 9-1-1 call access and the variances of location data provided to the PSAP.

As early as April of 2001, Project LOCATE reported that its members had met with representatives from six of the country's largest wireless carriers. These meetings allowed all the parties to gain valuable insight into the complexity of the issues surrounding implementation of wireless 9-1-1 services. The specific technology and political implications of waivers, PSAP and Wireless Service Provider (WSP) costs, PSAP readiness, location technology accuracy, liabilities and other bureaucratic matters were all covered during these early discussions. In the same timeframe, Project LOCATE also met regularly with the Federal Communications Commission's (FCC) Wireless Bureau for briefings, updates and participated in comments for the King County and Richardson rulings. In those meetings, Project LOCATE offered its continued support to work with all the parties, to accelerate deployment while identifying the challenges, as well as successes of PSAPs across the country.

By these formal meetings, Project LOCATE had already established a nationwide network of PSAP Managers, known as the Model Community Managers, one in each state, to provide first hand monitoring of deployment efforts and challenges in all the states. In addition, this first ever such approach, provided LOCATE, the FCC and the WSPs with actual details of state funding, implementation challenges as well as the growing impact of wireless 9-1-1 calls had on PSAP daily operations. Project LOCATE used this information to create Wireless Readiness and Deployment Resource Rooms at APCO Conferences, starting in 2001. For the next seven years, APCO members have had an opportunity to learn from others, discuss what might be unique deployment issues, as well as network with peer resources for direct assistance with all aspects of wireless 9-1-1 topics.

In 2002, Project LOCATE produced the first summary report of state by state efforts to fund and achieve wireless 9-1-1 deployment. Deployment efforts were still lagging behind the expansion of wireless as a means of primary and secondary communications.

Project LOCATE also recognized that PSAP staff training, first responder awareness, as well as public expectation regarding wireless performance, accuracy and consistency was not on coordinated to achieve the goal of well informed consumers of this new the communication technology for access to 9-1-1 service. With grant funds awarded directly to Project LOCATE by Nextel PSAP Readiness Board, action was begun for expanded public education efforts, including wireless 9-1-1 call cards as well as public service announcements for both television and radio, nationwide. Wireless 9-1-1 was a common topic at state, regional as well as national public safety communication conferences. The www.locatemodelcities.org website became the official repository for wireless 9-1-1 information, allowing access by any APCO member at any time.

The creation of the Public Safety Foundation of America (PSFA) with the original award of \$12.1 million in grant funds from the Nextel PSAP Readiness Board to APCO, International provided a new direct grant program to PSAPs in order to expedite wireless deployment. The APCO Executive Council provided approval, as well as clear guidelines for the management of these grant funds. Project LOCATE initially assisted the PSFA review hundreds of grant applications, and eventually the Project LOCATE Team members became the formal Grant Review Committee for the PSFA Wireless Deployment effort. Hundreds of member volunteer hours were devoted to the PSFA to maintain the highest level of integrity in all aspects of the grant application and award process. Throughout the process, Project LOCATE continued to seek necessary and appropriate accounting of funds to help ensure that the original purpose of the remaining funds was fully recognized and adhered to by the Association.

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Project LOCATE identified under-deployed areas of the United States and found that the State of Kansas was anxious to have a neutral, informed resource assist them in getting wireless 9-1-1 in place across the state. The Wireless Deployment Handbook was created for Kansas and soon was a standard for all PSAPs throughout the country.

In mid 2004, APCO filed a petition seeking a declaratory ruling by the FCC as to the appropriate area to which the current FCC wireless accuracy parameters were to be applied. APCO Project LOCATE had provided input throughout the NRIC VII effort, as well as FCC Summits regarding the many compromises to any PSAP level accuracy standard compliance. Project LOCATE again took the initiative and with a supplemental grant from the PSFA following all the formal application processes conducted the performance testing of deployed systems at seven distinct PSAP Service Areas across the country. The results were less than as expected and based upon input from the WSPs; a second round of repeat validation testing was conducted with a follow-up grant from the PSFA. The Wireless Location Data Final Report was made available to Congress and the FCC, and it was clear that the effort of Project LOCATE was going to result in a review of the current FCC rules.

In January of 2004, APCO announced the Project LOCATE Wireless Deployment Symposium Series to be conducted at selected cities across the country during the year. The series was successful and well attended as national attention was brought to the wireless 9-1-1 issues faced by public safety. At the final session in November near Washington, DC. FCC Commissioner Jonathan S. Adelstein addressed the Symposium. The comments of the Commissioner demonstrated the value of the many Project LOCATE efforts to public safety. Commissioner Adelstein said, “When people look back on the work of APCO and its membership, it will be said that you saved many worlds through this effort. You will have helped so many people who are otherwise facing imminent harm or even death to be located more quickly by emergency personnel. There is no higher calling or higher priority for us at the FCC than E9-1-1. Every day, we confront issues that can affect up to billions of dollars by major players in these industries. But unlike a lot of issues we handle that get so much attention, this literally is a matter of life or death.

We have come a long way since then, but we still have a long way to go. That is why the work of APCO and Project Locate is so important. We cannot rest until wireless E9-1-1 is available in all of our nation’s PSAPs and to all wireless phone subscribers. I was thrilled to be asked to speak at today’s symposium because it’s events just like this that keep the spotlight on the success – and challenges – of wireless E9-1-1 deployment. I want to specifically commend APCO’s Project Locate for its continued focus on this mission. It is highlighting the work of model communities that are tackling the complexities and challenges associated with the deployment of wireless E9-1-1. Through it, others are learning and are becoming better informed about PSAP readiness and what it takes to successfully deploy E9-1-1 in the real world.”

Beginning in 2005 and thru 2006, Project LOCATE reinforced its mission of providing PSAPs, local executive decisions makers, WSPs, first responders and the public with candid assessment of the actual performance of wireless 9-1-1 across the nation. Based on the Wireless Location Data Final Report, assessing the value of location data provided to the PSAP with wireless 9-1-1 calls, a set of Effective Practices for Deployment and Management of Wireless 9-1-1 were created. These Effective Practices are currently in the final stage of being accepted as standards through the American National Standards process.

Project LOCATE continued to represent PSAPs at major meetings, conferences and technical committee efforts on topics related to the deployment and management of wireless 9-1-1. Later that year and into 2008, Project LOCATE activity was suspended based upon questions raised by LOCATE and the Board as to how much funding was actually still available for various projects. The effort to adequately serve the membership on wireless and related issues stalled for several months until the original grant funds awarded to Project LOCATE were properly audited and the fund balance determined.

Understanding the importance of knowing the actual performance of the deployed wireless system within every PSAP Service Area, Project LOCATE also provided members with a report to assist them in their local review of actual performance of deployed wireless E9-1-1 systems. This Project LOCATE document, *Evaluating Wireless E9-1-1 System Performance at the PSAP – A Manual for PSAP/AHJ Managers* offers guidance to PSAPs on the process of conducting credible performance testing at the PSAP level. This information is critical to PSAP staff, responders, as well as the



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public with whom the results should be shared. The consumer of such services must understand the limitations and as the benefits of wireless technology in times of actual emergencies.

In the months before closing the Project, the LOCATE Team made a proposal to the APCO Board of Officers and the PSFA Board of Directors to expand and fund the current Member Assistance Advisory Program (MAAP) to include wireless deployment direct assistance from readiness through actual implementation. The proposal also included a special, short term PSAP grant program in order to reinforce this effort to facilitate wireless deployment within the remaining under-deployed areas. Project LOCATE proposed that the balance of the original, dedicated funds from the NEXTEL PSAP Readiness Board to the PSFA be used for a one time, special grant program to those PSAPs seeking such assistance. The grant application, requirements and criteria, to be developed by the Communication Center and 9-1-1 Services Department, will be eligible for grant funding to accomplish that final push to reach completion of Phase II wireless 9-1-1 service.

In addition, Project LOCATE is closing with unexpended PSAP Readiness Board funds remaining, which were provided to address issues of and advance wireless deployment throughout the country. Project LOCATE is recommending to the APCO Board of Officers that, consistent with their original purpose, these funds should be added to the PSFA dedicated dollars available for such a grant program or other activities related to the original intent.

MAAP is a current service of APCO and, in the absence of Project LOCATE, will assume the role of assisting PSAPs achieve access via 9-1-1 to wireless callers. Using Project LOCATE grant funds, the next generation of APCO active members will be trained to use the resources created by Project LOCATE in order to provide direct assistance to those PSAP jurisdictions that make formal request for such assistance.

The Impact of Wireless E9-1-1 and Other Issues Today for APCO Members

Wireless 9-1-1 is still not ubiquitous across the country. The pockets where wireless E9-1-1 is still not adequate need to be made smaller each year until 100% of the nation and the population have access to 9-1-1 via their wireless phone. In addition, the value of the location data provided to PSAPs for the caller who cannot speak, or adequately describe the location of the emergency remains inconsistent and does not always support the effective dispatch of emergency resources. Continual enhancement and improvement of location accuracy needs to be addressed and pursued.

The FCC continues to need a competent source of information, from public safety practitioners based on actual experience, about the nature and condition of wireless 9-1-1. The FCC still has not ruled on the Part IIIB section of their NPRM and the FCC seeks a sustainable position to deal with these issues while still supporting the fundamental position that a wireless device should provide adequate location information to achieve a successful response. There is a continuing need for evaluation of every alternative but not an acceptance that multiple location standards are appropriate for multiple technologies in time of emergency.

The accuracy of location data is not limited to wireless 9-1-1. As new access to 9-1-1 are created and marketed, it is reasonable to believe that each will present the need to assess what value the location data has for dispatch purposes in times of emergency. The 14 year history of 94-102 should not be the standard by which public safety professional groups deal with new technology, which provides access without any responsibility to mitigate the negative impact on PSAPs.

As Project LOCATE closes this chapter of APCO history, the members of the LOCATE team call on each and every member of the Association to advocate for those issues that are significant to you. We challenge you to continue the attention on the impact of wireless 9-1-1 service at the PSAP level which affects your operation and your ability to serve your public. We hope you will assist the leadership of this Association to pursue the interests and needs of our members and to continue to insist on the high quality of 9-1-1 service the American public has come to expect.

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Section 1: Project History

As the use of wireless 9-1-1 service was initially expanding across the country, the APCO Executive Council created Project 38, later named Project LOCATE in August of 2000 to monitor and study the impact of wireless 9-1-1 on PSAPs. Over time an expanded mission was approved and Project LOCATE was charged with seeking appropriate means of facilitating wireless deployment which included assisting PSAPs understand the technology, how to make a valid request for Phase I or II service, improving public awareness, as well as seeking to resolve the technological, operational, funding and project management issues created by wireless 9-1-1 call access and the variances of location data provided to the PSAP.

In 2002, Project LOCATE produced the first summary report of state-by-state efforts to fund and achieve wireless 9-1-1 deployment. Deployment efforts were still lagging behind the expansion of wireless as a means of primary and secondary communications.

With grant funds awarded directly to Project LOCATE by Nextel PSAP Readiness Board, action was begun for expanded public education efforts, including wireless 9-1-1 call cards and public service announcements (PSA) for both television and radio, nationwide. Wireless 9-1-1 was a common topic at state, regional and national public safety communication conferences. The www.locatemodelcities.org Web site became the official repository for wireless 9-1-1 information, allowing access by any APCO member at any time.

No report can adequately capture the actual impact of Project LOCATE during its term of service to APCO members, public safety in general and the wireless consumer. Thousand of volunteer members' time supported by paid staff was committed to providing the best information, advice, guidance and direction to PSAPs across the country, from the one position dispatch facility to some of the largest in the nation. Here is offered only a limited sample of the Project LOCATE deliverables to the members:

1. Wireless Readiness and Deployment Resource Rooms at APCO National Conferences from 2001 through 2008.
2. Experience and Lessons Learned from the Model Community Managers (MCM) group. Collected, documented and shared with others to help expedite wireless deployment.
3. Representation before the FCC, select Congressional Committees, Other Public Safety Associations as well as participation in NENA SWAT, FCC Network Reliability Industry Council VII, and ESIF (Emergency Services Interconnection Forum).
4. Development and delivery of Wireless Deployment Symposium Series across the country.
5. Direct Deployment Training materials known as the Wireless Deployment Handbook and programs specifically for under-deployed areas.
6. Creation of multi-media materials for radio, television, print media and local distribution by public safety communication personnel. Wireless 9-1-1 Call Cards, PSA Heart Attack & Hikers, in both sound only and video versions. (See Appendix A)
7. Thorough, competent review and assessment of 683 submitted PSFA Wireless Grant Applications, creation of appropriate pre-screening tools for grant application, defined parameters of fundable and non-fundable elements to assist applicants achieve inclusion in the final review per PSFA Grant Round and ultimate recommendation to the PSFA Advisory Committee and the PSFA Board of Officers.
8. Collaboration with the APCO Board in submission of the APCO Petition to seek a declaratory judgment regarding the definition of the accuracy compliance test area. This single effort sought to have the PSAP Service



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Area become the legitimate test area within which accuracy in compliance to the existing parameters could be expected by PSAPs, Responders as well as the Public.

9. *The Wireless Accuracy Final Report, An Assessment of the Value of Location Data Delivered to PSAPS with Enhanced Wireless 9-1-1 Calls*, April 2007, was distribute to the APCO membership, Congress and the FCC.
10. *Wireless 9-1-1 Deployment and Management Effective Practices*, which arose from the actual testing program across the country, created by Project LOCATE in 2005-2006.
11. *Evaluating Wireless E9-1-1 System Performance at the PSAP – A Manual for PSAP/AHJ Managers*. This Manual provides the Manager of any size PSAP the information necessary to conduct reasonable, defensible emulation of consumer experience with wireless E9-1-1 throughout the PSAP Service Area, including how to evaluate the results for improved service to their public.
12. Project LOCATE has also made several proposals to the APCO Board of Officers to expand the current Member Assistance and Advisory Program (MAAP) in order to allow continued direct service to PSAPs still struggling with the wireless deployment issues.
13. Wireless Deployment Facilitators, who will ultimately work under the authority of MAAP will be trained in August, 2008, by Project LOCATE members. All expenses of the training and associated materials were paid for by Project LOCATE out of its dedicated grant funds.
14. Project LOCATE will review and revise the training materials as necessary after their initial use and then turn over to the Communications Center and 9-1-1 Services Department, which is responsible for the MAPP, all the continuing maintenance of the materials for ongoing support of the Facilitators and the training program.
15. Project LOCATE submitted a specific proposal to the APCO Board of Officers, in their capacity as the Board of Directors of the PSFA to authorize a special grant opportunity to support PSAPs that may need only moderate assistance to reach the goal of wireless deployment. This action will once again demonstrate the integrity of APCO and its members, by complying with the PSAP Readiness Grant Award specifications and the direction of the Executive Council of using the funds solely for wireless deployment issues.

The work of Project LOCATE on behalf of PSAPs, Responders and the Public is not done. However, the Project Chair has been informed that the Project will close at the end of the 74th APCO Annual Conference and Expo. The Chair has requested that the Board of Officers continue to address the issues and challenges of wireless E9-1-1 for the benefit of the membership and the public at large in some appropriate manner going forward. The formal APCO Board action to close Project LOCATE should not suggest to any member that the all the issues related to effective wireless 9-1-1 or the ongoing management challenges have been resolved. Members should be ever vigilant and demand the support from their professional Association that they need and desire on this and other critical issues, facing members everyday.

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Section 2: The Mission of Project LOCATE

In early 2000, APCO had already become critically aware of the challenges facing Public Safety Answering Point Managers that were actively seeking to deploy wireless 9-1-1 service within their service area. Debates and confusion about funding that included a charge to a new group of wireless phone users, requirements for a valid wireless deployment request, location determination by latitude and longitude, cost sharing responsibilities of the Parties were new to many PSAP managers as well as their executive decision making authority (AHJ). New call routing plans, alternate location routing, location technologies, uncommon ALI screens, multiple methods employed by various WSP, third party provider technologies and methods, necessary changes in PSAP equipment, training and approach to such calls as well as a new definition of accuracy which was far from the reliability and consistency of wireline automatic location information clouded the positive experience of Enhanced 9-1-1 for many.

The consumer, based partly on advertisements and partly on lack of understanding, assumed a wireless phone would “act” just like a wireline phone within any Enhanced 9-1-1 service area. PSAPs that had been fully enhanced for some time suddenly found a growing number of their 9-1-1 calls were again “Basic” no useful location information and a caller that was upset because their location was not automatically available at the PSAP in times of crisis.

PSAP Managers that had for many years relied upon the assistance of the 9-1-1 System Service Provider now found the responsibility to coordinate and manage wireless 9-1-1 service, with its multiple Wireless Service Providers and their multiple third party participants was a new management task. These frustrations are exaggerated by the accelerated growth of wireless phone usage as a means of accessing emergency services by using 9-1-1. In 2002 wireless 9-1-1 calls were reported as 30% of total 9-1-1 call volume; by 2007 that percentage had grown to at least 50% of total call volume today. This growth was often the topic concern of public safety groups but a clear champion to carry the message related to the impact on every PSAP was still missing.

Project Leadership and Member Participation

APCO Leadership on behalf of PSAPs and Telecommunication Officers was well known and respected through the dedication and hard work of individual members, identified by the Board of Officers, supported by the APCO Executive Council which had the responsibility to set priorities for the Association endorsed the concept of Project LOCATE in August, 2000 when then President Joe Hanna and Executive Council member Thera Bradshaw presented the concept to the Executive Council. PSAP staff and management now had found a champion to carry their message to the legislative, regulatory and executive leadership of states and the country.

The first Chair of Project LOCATE was Bill Hinkle of Ohio, a respected public safety communications professional, whose reputation and competence bought credibility to the undertaking. Under his watch, LOCATE began to assess the national wireless deployment landscape, collecting state specific information from a group of PSAP/AHJ Representatives that became known as the APCO Project LOCATE MCMs. This group of individual, active APCO Members had the local experience and willingness to serve as a focal point within their state in order to monitor deployment, assess challenges of all types, identify training needs as well as share their enthusiasm for getting to wireless deployment as quickly as possible. Each of them were committed to the life saving extension of the universal number, 9-1-1, to wireless instruments for reporting emergencies.

The historic APCO long standing value of being a member-driven organization was well fitted to this approach to seeking resolution of complicated issues.



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Section 3: Project LOCATE Activity—Direct Benefits to Members

In 2001, the first LOCATE Resource Room at a national conference was established and PSAP Managers were invited to discuss their issues with representatives of the FCC, the WSPs and Third Party Location Service Providers in private setting.

Model Community Managers-APCO'S Pulse on Actual Experience

The first steps of Project LOCATE were underway and its representation of the collective experience of the 50 state MCMs quickly became a powerful tool in Washington, DC. At the individual State level, Project LOCATE became recognized as an effective and competent source of information and support to those struggling with the challenges from understanding of the issues through having difficulty with a wireless service provider or their own 9-1-1 service provider. Reports and action by Project LOCATE was reported regularly and widely, as the member constituency found this new APCO group to be a valuable ally.

Project LOCATE MCMs provided the basis of APCO Policy decisions and action, responding to surveys to document the actual field experience related to costs, p-ANI assignment, increased training needs, inconsistency of response from providers or the actual delay in response to real emergencies caused by poor location associated with the wireless E9-1-1 call.

The original group of MCMs included:

State	Name	Organization	City
AK	Brian Metras	Anchorage Police Department	Anchorage
AL	Janice Stamps	Butler County 9-1-1	Greenville
AR	John Gibson	Washington County	Fayetteville
AZ	Sharon Schauer	Flagstaff Police Department	Flagstaff
CA	Charles Cullen	Palo Alto Police Department	Palo Alto
CO	Cory Friend	Douglas County Sheriffs	Castle Rock
CT	George Pohorilak	Office of Statewide	Middletown
DC	Michael Eldridge	Metropolitan Police Department	Washington
DE	Terry Whitham	Delaware State Police	Smyrna
FL	Mark Adler	EMS/9-1-1 Management	West Palm Beach
GA	Carolyn Hunter	Rockdale County 9-1-1	Conyers
HI	Tommy Takeshita	Maui Police Dept 9-1-1 Comm	Maui
IA	Sandy Morris	Des Moines Police Department	Des Moines
ID	Les Shaddock	Ada County Sheriffs Office	Boise
IL	Norm Forshee	St Clair County	Belleville
IN	Ken Lowden	Steuben County	Angola
KS	Mary Messamore	Sherman County Consolidate	Goodland
KY	Stephen "Mitch" Mitchell	Louisville Metro Emer Mgmt Agency	Louisville
LA	Woody Glover	St. Tammany Parish Comm District	Covington
MA	Blair Sutherland	Massachusetts State Police	Framingham
MD	Cathy Kurnas	Plant Equipment Inc.	Baltimore
ME	Al Gervenack	State of Maine E9-1-1	Vassalboro
MI	Rebecca Shatney	Ottawa County Central	Grand Haven

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MN	Pete Eggiman	St.Louis Park 9-1-1	St.Paul
MO	Ron Boyer	Jasper County Emergency Services	Carthage
MS	George Scholl	Jackson Co. Emer. Com. Dist.	Pascagoula
MT	Bruce Cunningham	Gallatin County	Bozeman
NC	Frank Thomason	Rowan County	Salisbury
ND	Gary Kostelecky	Stark County Emer. Mgr	Dickinson
NE	Kara Thielen	Nebraska Public Srvc Commission	Lincoln
NH	Peter Denuette	Bureau of Communications	Concord
NJ	Victory Cuttitta	Bergen County Police	Paramus
NM	Art Rios	State of New Mexico	Sante Fe
NV	Penny Lee	City of Henderson	Henderson
NY	Stephen Wisely	Onondaga Co 9-1-1	Syracuse
OH	Michael King	Miami County	Troy
OK	John Hampton	Tulsa Public Safety Communications	Tulsa
OR	Ken Keim	Oregon 9-1-1 Program	Salem
PA	Bob Fasick	Dept of Emergency Services	York
RI	Raymond LaBelle	E9-1-1 Emergency Telephone	North Providence
SC	David Jones	Spartanburg County	Spartanburg
SD	Doug Pavel	Emergency Services Communications	Rapid City
TN	Barry Furey	Knox County Emergency	Knoxville
TX	Mike Pedigo	Denco Area 9-1-1 Board	Lewisville
UT	Terry Ingram	Valley Emergency	West Valley
VA	Terry Hall	York County	Yorktown
VT	Evelyn Bailey	Vermont Enhanced 9-1-1 Board	Montpelier
WA	Debra Willis	Washington State Patrols	Bellevue
WI	Richard McVicar	Dane County Public Safety	Madison
WV	Allen Holder	Lincoln County E9-1-1	Hamlin
WY	Dale Stalder	Laramie Police Department LARC Div.	Laramie

Many of these individuals remain resources within their own state and to others still to this day. Their long term commitment to the public consumer of wireless E9-1-1 service is commendable and further indicative of the quality of our members. We are pleased to acknowledge their contribution to the LOCATE effort and thank them for sharing their experience over the years with this Project.

LOCATE's 2002 Special Report on Wireless Deployment

In 2002, Project LOCATE led by Bill Hinkle and Members: Rick Hessinger, North Dakota Chapter Chris Fischer, Washington Chapter, Jack Keating, CPRA/Southern California, Nancy Pollock, Minnesota Chapter Steve Souder, Maryland Chapter, Gregory Ballentine, APCO Board and NENA Representative Jim Goerke produced the first Project LOCATE Special Report, detailing the legislative (funding), regulatory and actual deployment progress across the nation. This would become the first of many valuable resources to be produced by Project LOCATE, on behalf of the APCO membership, over the next seven years.

The summary of funding legislation and distribution plan for each state was updated and maintained by the 9-1-1 Services and Communication Center Operations Office of APCO thru 2006. The document remains available on the APCO Web site and has been updated thru March of 2008.



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Nancy Pollock assumed the Chair of Project LOCATE following Mr. Hinkle and continues in that position through the 74th Annual APCO Conference and Expo, in Kansas City, Missouri when the Project presented its final report. During the years of leadership provided by Ms. Pollock, the mission to achieve wireless Phase II deployment nationwide, establish fair and realistic cost controls, as well as strive for useful location data in times of true emergencies continued in earnest.

The active membership for a significant portion of Project LOCATE activity included Michael Pedigo, Denco Area 9-1-1, TX, Martin Moody, Metropolitan Emergency Services Board, MN, and APCO Staff Members Stephen Wisely and William Cade.

The industry and regulatory activity, partly policy and partly technical, kept the Project LOCATE team one of the most active groups within APCO.

During this period, Project LOCATE regularly participated in the Emergency Services Interconnection Forum of ATIS (ESIF), NRIC VII as established by the FCC, various FCC Summits, state and regional public safety communication conferences, meetings and focus groups. The Project also sponsored the Wireless Deployment Symposium Series, developed and conducted statewide training for wireless deployment mentors as well as continued to provide input to the APCO Board of Officers on wireless E9-1-1 policy positions based on APCO member needs.

PSAP Readiness Board Funds Initial LOCATE Activities

As deployments continued so did the often recurring challenges and occasionally new obstacles were identified. Project LOCATE, seeking to address the issue nationally as well as provide support locally, sought grant funding from the PSAP Readiness Board, created by the Nextel Foundation. In July, 2003, APCO signed a contract with the PSAP Readiness Board (referred to as the Organization) accepting \$630,000.00 for Project LOCATE.

The language of the contract reads in part: “the Board of Directors of the Organization has approved a grant to the Association of Public-Safety Communications Officials, International (APCO)”... “specifically to support APCO’s Project LOCATE in its mission to help PSAPs ready themselves to receive wireless E9-1-1 technology so they may identify the exact location of emergency calls made from wireless phones.” The contract language also admonished against using any of the grant funds for other purposes.

The goals, tasks identified within the Project LOCATE grant application to the PSAP Readiness Fund (the Organization) included:

1. Model Communities Support
 - on going newsletter, conference calls, meetings, surveys
2. Develop “operational snapshot of progress” from the PSAP Field
 - Open and continuing contact with state chapters,
 - MCMs development of Top Tips and Challenges
 - Recognition of the multiple stakeholder per PSAP issues
3. Staffing Resources
 - Wireless Deployment Coordinator (contractor) position filled
4. Public Educational and PSAP Training Materials
 - PSAs, Call Cards (see Appendix A)
 - Public safety industry magazine articles
 - Public Service Announcements
 - Public print, television and radio media pieces
 - LOCATE Wireless Deployment Handbook (v1 2004, REVv2 2008)

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5. Development of Case Studies
 - examples of deployment
 - published by PTI, Wireless E9-1-1 Implementation Guide
6. Support Participation in Stakeholder Focus Group Meetings
 - NENA SWAT
 - NENA
 - NASNA
 - ESIF
 - NRIC
 - FCC Summits
7. Regional Informational Seminars
 - Deployment Symposia
 - Regional and State Public Safety Meetings
 - State level presentation and training
8. Reporting Opportunities and Processes
 - Reports directly to APCO Board
 - Executive Council Members
 - Presentations at Annual Conference and Winter Summit

In order to accomplish the mission of Project LOCATE, in a manner consistent with the purpose of the Grant additional staff support was needed. Once again, the Board of Officer and the Executive Council agreed and approval was granted as part of the 2004 Budget of APCO.

Wireless Deployment Handbook-A First Ever Resource Guide

In mid 2004, a Wireless Deployment Coordinator was hired. The incumbent served in this capacity half time and fulfilled the duties of the newly created Technical Services Manager position within what was then the 9-1-1 Services and Communication Center Operations Office at APCO, for the other half of the normal work week. This additional single resource allowed an expansion of wireless deployment support activity that included the Wireless Deployment Handbook, first used throughout the State of Kansas.

The Handbook was revised in March, 2008 and continues to present appropriate, timely information to PSAP/AHJ Managers related to accomplishing the objectives:

- Understand the regulatory aspect of wireless 9-1-1 service
- Identify LEC/Local Exchange Carriers, 9-1-1 System Service Providers
- Assess the wireless call compatibility of current PSAP CPE
- Define Primary/Secondary PSAP, Default PSAP, Back-Up PSAP
- Assist with effective wireless call routing, trunking and database decisions
- Describe wire line/wireless call flow
- Identify legitimate ways to use X/Y data
- Clearly help manage service expectations
- Recommend Public Education efforts
- Create an accurate deployment cost per PSAP
- Introduce the secondary processes in moving to wireless deployment

In addition, APCO leadership and Project LOCATE were now represented in a consistent manner at the technical discussions of ESIF, where wireless industry representation often dominated the discussion and standards development effort. Presentations to the FCC and APCO Membership demonstrated the value of having technically competent staff involved in such discussions. That position vacated in 2006, when the management of the 9-1-1 Services and Communication Center Operations Office at APCO changed and the incumbent in the position resigned.



Project LOCATE

Subsequently, technical participation in the ESIF process has been funded by LOCATE and Project 41 but will end with the termination of this Project unless other commitments are secured.

PSAP Readiness Board Further Funds Deployment Assistance

Prior to the grant to Project LOCATE by the PSAP Readiness Board, the same group granted to APCO, International \$12.1 million dollars for the specific purpose of advancing wireless deployment.

An excerpt from the grant contract reads:

F. GENERAL PROVISIONS

Under the applicable laws of the United States, all Grant funds must be expended for purposes of social welfare within the meaning of Section 501(c)(4) of the Internal Revenue Code of 1986, as now in effect or as may hereafter be amended (the "Code"). Specifically, the Grant must be used for the purpose of supporting the deployment of wireless enhanced 911 and to foster the development and timely deployment of advanced location emergency services across the United States, particularly in areas underserved by modern communications technology. The Grant is made only for the purposes stated in this letter, and the Grant funds as well as any interest or income earned thereon may not be expended for any other purpose without the Organization's prior approval in writing. Any funds not expended or committed for the purposes of the grant must be returned to the Organization. If the Organization becomes aware that the funds are not being used for the purposes described above, it reserves the right to be reimbursed for the amounts so diverted.

The Executive Council action in August 2000 to accept this grant award and which included clear guidelines for the management of these grant funds, resulted in the creation of the Public Safety Foundation of America (PSFA). The PSFA and its Advisory Committee, was charged with developing a new direct grant program to PSAPs in order to expedite wireless deployment. Project LOCATE at first assisted the PSFA in reviewing the hundreds of grant applications and eventually the Project LOCATE Team members, became the formal Grant Review Committee for the PSFA Wireless Deployment effort. Hundreds of member volunteer hours were devoted to the PSFA to maintain the highest level of integrity in all aspects of the grant application and award process. Of the 682 applications reaching the final scoring round, 218 were approved for funding. In total \$13,684,394.00 was awarded. This amount was derived from the initial award, earned interest as well as portions of funds non expended and returned by applicants.

Throughout the process, Project LOCATE continued to seek necessary and appropriate accounting of funds to help ensure that the original purpose of the remaining funds was fully recognized and adhered to as defined by the Executive Council on behalf of the APCO Membership.

The activity of the PSFA Wireless Deployment Grant activity has been documented and separately reported to the APCO Board and Executive Council, by the 9-1-1 Services and Communication Center Operations Office before the transition in 2006.

Wireless Symposiums Seek to Educate and Inform

Another deliverable to APCO members by Project LOCATE was the series of Wireless Deployment Symposiums conducted across the country, in 2004. The final session was purposely held just outside Washington, DC in order to facilitate the presence and participation of appropriate federal regulatory officials. This example of the Symposium Announcement reminds the reader of the content value which lead to a full room, the days of the sessions.

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WIRELESS DEPLOYMENT
CROWNE PLAZA HOTEL
November 15 & 16, 2004
Washington - National Airport
1489 Jefferson Davis Highway
(Crystal City) Arlington, VA 22202

This is a tremendous opportunity for public safety communications professionals to network with their peers and learn the challenges and solutions experienced by others. APCO is pleased to bring together experts from the industry to share actual experiences and lessons learned while implementing enhanced wireless 9-1-1. This symposium is truly a must attend if you are just planning deployment or struggling with post-deployment challenges.

Greg Ballentine
President of APCO INTERNATIONAL

Monday, November 15

1:00 pm-1:15 pm	Opening & Welcome -- Greg Ballentine, APCO International President
1:15 pm-2:15 pm	An overview of Wireless Technologies: Challenges and Opportunities
2:15 pm-2:30 pm	Break
2:30 pm-3:45 pm	Lessons Learned and Resources Available - Operational & Training Issues What should the PSAP Manager know to properly prepare staff for wireless E9-1-1? What can you learn from the experience of colleagues and peers? What adjustments to operating procedures and training need to be made to prepare your staff? What are the long term impacts to your operations?
3:45 pm-5:30 pm	Technical Accuracy Testing-What are you really getting? Do you know? How does it impact your operations? How are wireless carriers conducting their testing? What is the difference between technical testing, performance testing and compliance testing?
5:30 pm-7:00 pm	Wine & Cheese Reception-Opportunities for networking with peers, carriers, technical experts, policy makers and regulators

At the symposium, FCC Commissioner Jonathan S. Adelstein was a featured general session speaker. His comments concerning wireless E9-1-1 and specifically the activity of APCO's Project LOCATE should be a clear indication of the value of our member driven mission and the deliberate processes used to make critical public safety communications decisions. He said:

“When people look back on the work of APCO and its membership, it will be said that you saved many worlds through this effort. You will have helped so many people who are otherwise facing imminent harm or even death to be located more quickly by emergency personnel. There is no higher calling or higher priority for us at the FCC than E9-1-1. Every day, we confront issues that can affect up to billions of dollars by major players in these industries. But unlike a lot of issues we handle that get so much attention, this literally is a matter of life or death.

We have come a long way since then, but we still have a long way to go. That is why the work of APCO and Project Locate is so important. We cannot rest until wireless E9-1-1 is available in all of our nation's PSAPs and to all wireless phone subscribers. I was thrilled to be asked to speak at today's symposium because it's events just like this that keep the spotlight on the success – and challenges – of wireless E9-1-1 deployment. I want to specifically commend APCO's Project Locate for its continued focus on this mission. It is highlighting the work of model communities that are tackling the complexities and challenges associated with the deployment of wireless E9-1-1. Through it, others are learning and are becoming better informed about PSAP readiness and what it takes to successfully deploy E9-1-1 in the real world.”



Project LOCATE

From practical experience at the PSAP level, often the subject of local if not national media attention, the importance of useful location data associated with the wireless 9-1-1 call had continued to be documented as indeed being a matter of life or death. In mid 2004, APCO filed a petition seeking a declaratory ruling by the FCC as to the appropriate area to which the current FCC wireless accuracy parameters were to be applied. APCO Project LOCATE had provided input throughout the drafting and presentation of the Petition to the APCO Board of Officers. The action was appropriate then and was affirmed by the active members voting at the Quorum session held in Baltimore, August of 2007 APCO Annual Conference and Expo. The position represented in these documents remains the official position of APCO International on the topic. Project LOCATE had reported to the Board, its participation in the NRIC VII effort as well as FCC Summits regarding the many compromises being sought by industry to the necessary requirement of PSAP level compliance with the current accuracy standards.

The Value of Understanding Performance

Since no action by the Commission was forthcoming on the Petition, Project LOCATE again took the initiative on behalf of the PSAPs and submitted an official grant application to the PSFA, which was approved by the PSFA in 2005. The Grant of \$750,000.00 was to develop and issue a formal RFP to conduct testing, select a third party contractor to conduct such tests; meet with the WSPs to review the results and define reasonable courses of action to make improvements at the PSAP level as well as provide the requisite PSFA Reports and Final Report to the APCO Membership and conduct presentations of the report in various forums. Testing was performed by an independent third-party contractor in seven PSAPs across the country. This collection of PSAPs offered a diversity of demographics and topography, a variety of local exchange carriers, automatic location and number identification equipment, and computer aided dispatch (CAD) systems. One Test Area was selected for secondary testing coordinated with the WSPs to determine the improvement in results if designated variables were more controlled.

The seven sites selected for the initial phase of wireless location data accuracy as delivered to the PSAP were:

- City of Palo Alto, California
- Marion County, Florida
- Jasper County, Missouri
- Onondaga County, New York
- Rowan County, North Carolina
- Bexar County, Texas
- City of Laramie, Wyoming

A Supplemental Test was funded by a second PSFA Grant of \$70,000.00. The purpose of the original test and the supplemental test and assessment conducted by public safety was to gauge the value and usability of the wireless location data which was presented to calltakers with wireless E9-1-1 calls requiring immediate assistance from callers that cannot speak effectively or adequately describe the location of the emergency.

Project LOCATE believes this endeavor has produced significant and critical information about the actual performance of the enhanced wireless systems deployed which has general impact on both deployment and quality assurance efforts by PSAPs across the country. In addition, the Project LOCATE grant activity demonstrated an urgent need to reconcile the expectations regarding perceived capability that the public and response agencies have with the more modest reality of current performance and capacity. This disparity was reportedly having an impact on deployment. The results were less than as expected and based upon input from the WSPs. The *Wireless Location Data Final Report* was made available to the APCO membership, Congress and the FCC.

It is clear that compliance and near compliance at the PSAP Level was possible, especially when the location technology choice used the “handset” solution. A full explanation of the testing process, methodology and results was published by Project LOCATE, under the complete title of An Assessment of the Value of Location Data Delivered to PSAPs with Enhanced Wireless 9-1-1 Calls. The new website www.APCOProjectLOCATE.org, obtained in 2008, replaces the previously cited repository for LOCATE related materials which was www.locatemodelcities.org.

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Presented here are examples of a WSP Testing Results Summary.

PSAP TEST AREA	Bexar County	Jasper County	Marion County	Onondaga County	Palo Alto	Rowan County
Location Tech Choice	network	network	network	network	network	network
Calls: WRLS COS	4.43%	9.36%	2.96%	5.42%	11.33%	0.00%
Calls: WPH1 COS	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Calls: WPH2 COS	89.66%	73.40%	39.41%	73.40%	45.81%	69.46%
Calls: Not WPH2	0.00%	0.00%	0.00%	0.00%	0.00%	4.93%
Locn Error OET-71 67% Index	55.00%	32.00%	24.00%	27.00%	52.00%	66.00%
Locn Error OET-71 95% Index	58.00%	39.00%	26.00%	27.00%	52.00%	72.00%
Calls: Dropped	0.00%	0.00%	1.97%	0.00%	0.49%	0.00%
Calls: Non Target PSAP	4.43%	13.30%	12.81%	11.82%	29.56%	18.23%
Calls: Poor Coverage	0.00%	0.00%	1.48%	6.90%	0.49%	0.49%
Calls: No Answer	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Calls: No Service	0.49%	3.45%	37.44%	0.99%	11.82%	5.42%
Total Calls	203	203	203	203	203	203

PSAP TEST AREA	Bexar County	Laramie County	Marion County	Onondaga County	Palo Alto
Location Tech Choice	handset	handset	handset	handset	handset
Calls: WRLS COS	1.97%	7.39%	3.45%	0.00%	8.87%
Calls: WPH1 COS	0.00%	0.00%	0.00%	11.33%	0.00%
Calls: WPH2 COS	91.63%	86.70%	52.22%	71.43%	38.92%
Calls: Not WPH2	0.00%	0.00%	0.00%	0.00%	0.00%
Locn Error OET-71 67% Index	67.00%	67.00%	55.00%	67.00%	67.00%
Locn Error OET-71 95% Index	90.00%	89.00%	57.00%	87.00%	80.00%
Calls: Dropped	0.00%	0.00%	1.97%	0.00%	0.00%
Calls: Non Target PSAP	3.94%	3.45%	13.79%	11.33%	39.41%
Calls: Poor Coverage	0.00%	0.49%	2.46%	3.45%	0.00%
Calls: No Answer	0.00%	0.00%	0.00%	0.00%	0.00%
Calls: No Service	1.48%	0.99%	23.65%	1.97%	10.84%
Total Calls	203	203	203	203	203

Project Locate summarized the actual measured performance of each wireless service provider at each of the PSAP Test Areas included in the study that the WSP advertised their coverage.

Project LOCATE sought to make this evaluation across a variety of PSAP Test Areas. The final sites allowed the testing plan to replicate average consumer expectation and use with locally available WSP-specific wireless telephone models which delivered wireless location data via multiple 9-1-1 System Service Providers, different WSPs' Third Party contractors, diverse CPE, different CAD systems, and alternate mapping software choices. These variables were further enhanced by consideration of PSAP size, daily service population and area in square miles, multiple terrain types and demographics, state or central wireless coordination, and cost recovery status.



Project LOCATE

Effective Practices Are “Lessons Learned” Shared for the Benefit of All

Project LOCATE knew that test results alone would not enable a PSAP Manager to successfully seek deployment of wireless E9-1-1 Services. These results and the testing methodology were discussed in detail with the appropriate Wireless Service Providers. The positive partnership that has developed and supported by the WSPs, despite legitimate differences of opinion, has resulted in significant benefits to public safety and the consumer of wireless E9-1-1 services. Project LOCATE truly appreciates the partnership efforts of these providers. From these candid exchanges, the Wireless 9-1-1 Deployment and Management Effective Practices Guide was developed. The topical areas, for which specific Effective Practices have been identified, based on lessons learned and conversations post testing and re-testing include:

- Policy Issues
- Managing Public Expectations
- Managing PSAP and Responder Expectations
- Rebids / Re-Query
- Confidence and Uncertainty
- Towers
- Cache
- PSAP Performance Testing
- Wireless Service Provider – PSAP Area Testing

These Effective Practices are currently in the final stage of being accepted as standards, following the appropriate American National Standards process. This is an important step for public safety as standards should always provide the basis of initial discussion with all stakeholders involved in the deployment and management of wireless E9-1-1 service. Each Effective Practice follows a selected format as shown here.

Wireless 9-1-1 Deployment and Management Effective Practices
<u>Policy Issues:</u>
<ul style="list-style-type: none"> • 380711 The AHJ should designate a wireless 9-1-1 deployment coordinator per PSAP service area.
<p>Rationale</p> <p>This Effective Practice seeks to encourage the formal designation of a wireless deployment coordinator per AHJ or PSAP.</p> <p>The Coordinator would be expected to have the requisite level of specific knowledge and skill set to work in a cooperative manner with the stakeholders including the wireless service providers or their third party contractor(s), the local 9-1-1 service provider, the PSAP customer premise equipment provider, the PSAP Computer Aided Dispatch (CAD) service provider, and the provider(s) of base map development and services (including the addressing responsibility within the service area).</p> <p>The Coordinator also would serve as the single point of contact within the PSAP Service Area for resolution of issues related to standard ALI display formats, tower site/sector call routing, default call routing decisions, the liaison for local testing and maintenance issues as well as providing documentation of all interactions and any local performance testing conducted by the PSAP/AHJ.</p> <p>In addition, the Coordinator would be responsible for assuring wireless call processing training materials include relevant information regarding the actual performance of the WSPs within the service area in relation to the usefulness of location data delivered to the PSAP.</p>
<p><u>Recommended Reference Materials:</u></p> <ul style="list-style-type: none"> • APCO Project LOCATE Deployment Handbook at www.APCOProjectLOCATE.org

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Performance Testing Guides for the PSAP

Project LOCATE continued to develop resources in support of PSAP/AHJ Managers seeking to deploy and effectively manage wireless E9-1-1 services within their own jurisdictions. It is accepted that not every or perhaps many PSAP/AHJ entities can afford to retain a third party contractor to conduct the thorough performance testing and analysis that Project LOCATE accomplished.

PSAP/AHJ Performance Testing is not accuracy testing for the purpose of assessing compliance with the current FCC standards. The purpose of Performance Testing is to assess the delivery of location data from a wireless E9-1-1 call via the existing WSPs deployed system, through to the PSAP, as captured in the Automatic Location Information (ALI) data display at a workstation. It further seeks to document the variance of the actual, delivered location data by measuring the difference between a location data determined by existing baseline map data or other typical survey methods or a differential GPS receiver and the location data actually presented to the PSAP, both initially and upon Rebid.

Despite debates about the sample size within any given PSAP Test Area, the fundamental measurement process is the same. A Test Point is identified and defined, including valid latitude and longitude coordinates. A valid number Test Calls are made using commonly available and used wireless instruments in the PSAP Service Area by each Wireless Service Provider. The ALI screen is captured at the PSAP taking the Test call, if WPH1, a rebid after 30 seconds is made and the secondary ALI display screen is also captured. The Location Data is compared to the “known” data for the Test Point and a deviation value in meters is noted. A sample of one Test Call Data array is presented here.

Loc	WSP	Call	Date	Time	COS	UNC	CNF	LAT	LONG	ERROR	COMMENT
7	300	1-I	4/30/08	1408	1	15380	100	37.2002	94.4752	1010	Arrived as WPH1
7	300	1-R	4/30/08	+:30	2	32	95	37.1988	94.4637	21	Rebid important

The value of any performance testing is greatest for the PSAP Staff. A thorough review and analysis affords the PSAP Manager the opportunity to determine the relationship of multiple variables and actions which can influence the ultimate usefulness of the delivered location data associated with wireless E9-1-1 calls. But the importance to the calltaker and dispatcher are even more significant. To them, being able to understand and interpret the information can impact the manner in which a call is handled, understanding of the responders to that event and even the response parameters and resources employed on the reported incident.

A regular review of the relationship between Uncertainty and both the initial presentation of location data and the post Rebid has significant influence on operational decision making and dispatch of appropriate services. The potential exists for the Uncertainty value to become the best indication of the usefulness of the location data at the PSAP. Consistent testing processes, appropriate timing of Rebid as well as subsequent calls per carrier must however be observed during each testing occurrence.

The Project LOCATE Report, Evaluating Wireless E9-1-1 System Performance at the PSAP – A Manual for PSAP/AHJ Managers, 2008 contains considerable more detail on all the aspects of the testing processes. In addition, Project LOCATE has offered Levels of Performance Testing by PSAP/AHJ size in consideration of the impact in time and money that such performance evaluation can have at any PSAP. The benefit to PSAP staff, Responders and the Public is significant and full consideration should be given to conducting performance testing at all PSAP/AHJ Service Areas.



Project LOCATE

Funding and Fiscal Responsibility

Project LOCATE determined in 2006 that unexpended funds, from the original PSAP Readiness Board grant with the previously stated conditions and restrictions to APCO remained uncommitted. Project LOCATE through both its contract staff person and the Chair sought assurances, from the APCO leadership, that such funds will only be used for their original, intended and specifically approved by the APCO Executive Council. These funds remained due to PSFA Grant awards to PSAPs not fully expended or returned because the PSAP could not complete the requirements of the grant award.

Project LOCATE members and staff made inquiry regarding the unexpended dedicated funds granted to Project LOCATE by the PSAP Readiness Board. That inquiry was coupled with a formal inquiry as to the status of the unencumbered balance of the PSFA Wireless Deployment Funds also granted by the PSAP Readiness Board. These requests for a determination led to Board direction that an audit by an external entity be commissioned. After some delay, an auditor was retained and the PSAP Readiness Board grant funds awarded to Project LOCATE were balanced and remainders determined. The remaining funds from the same source to the PSFA were also identified. Unfortunately, because the Association is authorized to utilize a percentage for administration even when no activity is underway, a lesser amount than Project LOCATE had first believed was available was ultimately determined to be the remaining funds.

The audit provided both LOCATE and the Board of Officers a definitive amount of remainder fund balance from which to proceed with any further activity or grant award. It is this amount of remainder funds which has led to the final effort of LOCATE, to train Wireless Deployment Facilitators for MAAP, and to request that the Board fund a modest grant program for PSAPs who need only a little bit of financial assistance to complete Phase II deployment and to turn over the management of the grant program to the Communications Center and 9-1-1 Services Department to administer through the MAAP program.

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Section 4: Project LOCATE Summary and Closing Comments

Wireless 9-1-1 is still not ubiquitous across the country. The pockets where wireless E9-1-1 is still not adequate need to be made smaller each year, until 100% of the nation and the population have access to 9-1-1 via their wireless phone. In addition, the value of the location data provided to PSAPs for the caller who cannot speak, or adequately describe the location of the emergency remains inconsistent and does not always support the effective dispatch of emergency resources. Continual enhancement and improvement of location accuracy needs to be addressed and pursued.

The FCC continues to need a competent source of information, from public safety practitioners based on actual experience, about the nature and condition of wireless 9-1-1. The FCC still has not ruled on the Part IIIB section of their NPRM and the Commission seeks a sustainable position to deal with these issues while still supporting the fundamental position that a wireless device should provide adequate location information to achieve a successful response. There is a continuing need for evaluation of every alternative but not an acceptance that multiple location standards are appropriate for multiple technologies, in time of emergency.

The accuracy of location data is not limited to wireless 9-1-1. As new access to 9-1-1 are created and marketed, it is reasonable to believe that each will present the need to assess what value the location data has for dispatch purposes in times of emergency. The 14 year history of 94-102 should not be the standard by which public safety professional groups deal with new technology, which provides access without any responsibility to mitigate the negative impact on PSAPs.

As Project LOCATE closes this chapter of APCO history, the members of the LOCATE team call on each and every member of the Association to advocate for those issues that are significant to you. We challenge you to continue the attention on the impact of wireless 9-1-1 service at the PSAP level which affects your operation and your ability to serve your public. We hope you will assist the leadership of this Association to pursue the interests and needs of our member's and to continue to insist on the high quality of 9-1-1 service the American public has come to expect.



Project LOCATE

Appendices

Appendix A.

Project LOCATE Wireless 9-1-1 Call Cards

www.APCOProjectLOCATE.org

Appendix B.

Website Resources

1. An Assessment of the Value of Location Data Delivered to PSAPs with Enhanced Wireless 9-1-1 Calls, 2007
2. Wireless 9-1-1 Deployment and Management Effective Practices Guide, 2008
3. Evaluating Wireless E9-1-1 System Performance at the PSAP – A Manual for PSAP/AHJ Managers, 2008
4. Wireless Deployment Handbook, 2008 www.APCOProjectLOCATE.org

Appendix C. Petition for Declaratory Ruling

Appendix D. Quorum Resolution

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Appendix A. Project LOCATE Wireless 9-1-1 Call Cards

These Call Cards were designed and distributed nationally, with a countertop/desktop stand/holder. Any PSAP/AHJ could obtain the cards and use them locally, in an effort to better inform wireless callers of the capability of wireless E9-1-1 within the PSAP/AHJ Service Area. Project Locate found that the local media usually cited by article or photo and article the distribution of the Cards, which allowed the PSAP/AHJ Representative to expand the message through the print media as well.



APCO International - Project LOCATE
Helping to Locate Our Citizens in Times of Emergency
To get help to you quickly, please be ready to answer these questions:

Where is the Emergency? Use road name, number, direction of travel, mile markers, intersections, landmarks etc

What number are you calling from? Always give the area code, wireless phone number. If using a phone without a service contract and the call is disconnected, YOU must redial 911.

What exactly has happened? Clearly describe what has taken place. Ex: What is on fire? Is the person conscious and breathing? Is the person visibly injured? Types and number of vehicles involved? If reporting a crime, vehicle & suspect descriptions are always important.

Call 9-1-1 ONLY when an immediate response by police/fire-rescue/medical services is required.



Enhanced Wireless 9-1-1 Services can save lives, reduce pain and suffering as well as mitigate damage to property. You can help improve services and prompt responses by:

- 1. Learning the non-emergency telephone numbers in your area;**
- 2. Not programming your cell phone to dial 9-1-1 when just one button is depressed;**
- 3. Disabling the auto dial to 9-1-1 on your cell phone**
- 4. Locking your keyboard when the phone is not in use to avoid accidental 9-1-1 calls, which can cause the unnecessary dispatch of services.**

Since Enhanced 9-1-1 Service does not work everywhere in the U. S., BEFORE purchasing any phone or service ASK the wireless service provider what location technology they have in place to assist emergency services find YOU in times of real crisis. ASK your local 9-1-1 Center if they can receive and use your 9-1-1 call location.



Project LOCATE

Appendix B. Website Resources

1. An Assessment of the Value of Location Data Delivered to PSAPs with Enhanced Wireless 9-1-1 Calls, 2007
www.APCOProjectLOCATE.org
2. Wireless 9-1-1 Deployment and Management Effective Practices Guide, 2008
www.APCOProjectLOCATE.org
3. Evaluating Wireless E9-1-1 System Performance at the PSAP – A Manual for PSAP/AHJ Managers, 2008
www.APCOProjectLOCATE.org
4. Project LOCATE, Wireless Deployment Handbook, 2008
www.APCOProjectLOCATE.org

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Appendix C. APCO Petition for Declaratory Ruling

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Revision of the Commission's Rules) CC Docket 94-102
to Ensure Compatibility with Enhanced)
9-1-1 Emergency Calling Systems)

REQUEST FOR DECLARATORY RULING

The Association of Public-Safety Communications Officials-International, Inc. (“APCO”) hereby requests that the Federal Communications Commission issue a declaratory ruling pursuant to Section 1.2 of its rules, 47 C.F.R. §1.2, to provide clarification of Section 20.18(h), 47 C.F.R. §20.18(h), of its rules. In particular, clarification is needed regarding the geographic area over which a wireless carrier must provide the levels of 9-1-1 location accuracy specified in the Commission’s rules, and the degree to which carriers must provide accuracy data to relevant Public Safety Answering Points (“PSAPs”).

APCO is the nation’s oldest and largest public safety communications organization.¹ Founded in 1935, APCO has over 16,000 members, most of whom are state or local government personnel who manage and operate communications systems for police, fire, EMS and other public safety agencies. APCO has long been an active participant in FCC proceedings concerning public safety communications, addressing both radio spectrum issues and Enhanced 9-1-1 (E9-1-1) matters that impact the operational requirements of Public Safety Answering Points (“PSAP”) and the ability of emergency personnel to respond quickly and accurately to 9-1-1 calls.

The Commission’s wireless E9-1-1 rules require wireless carriers to provide PSAPs with the location of 9-1-1 calls. Pursuant to Section 20.18(h), carriers using network-based location technologies are to provide accuracy within 100 meters for 67 percent of calls, and 300 meters for 95 percent of calls. Carriers using handset-based location technologies are to provide accuracy within 50 meters for 67 percent of calls, and 150 meters for 95 percent of calls. The rules do not specify the relevant area over which such accuracy is to be measured.

A. Accuracy Measurement Area

In April 2000, the FCC’s Office of Engineering and Technology issued OET Bulletin No. 71, “Guidelines for Testing and Verifying the Accuracy of Wireless E9-1-1 Location Systems,” which describes E9-1-1 accuracy testing methodology. However, OET Bulletin No. 71 does not provide clear guidance as to whether the relevant area of measurement should be a PSAP service area, a carrier’s service area, or some other alternative:

Reports of compliance testing should clearly define the subject geographical areas. Accuracy tests may be based on the coverage areas of local PSAPs that request Phase II deployment. It may be appropriate to subject a wireless service provider’s entire advertised coverage area within a metropolitan area or similar region to testing, as suggested by the National Emergency Number Association, but these are typically large areas and initial ALI deployment may proceed more gradually. Thus, testing may initially cover an urban core and later extend to the response area of a local PSAP. Compliance may be verified for these subareas separately or in combination. However, the areas delineated for compliance testing should not overlap. It is unacceptable to include the same geographic sub-area in two or more test areas, especially if the sub-area is relatively undemanding for the location technology.

This matter has also been the subject of extensive discussion within the Emergency Service Interconnection Forum (ESIF) and the Network Reliability and Interoperability Council (NRIC) VII. However, as recently described

¹ www.apcointl.org

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PSAPs may fall into this category). The Commission should encourage PSAPs in such areas to join together to create generic service areas for purposes of measuring accuracy, though the “default” for carriers should always be that accuracy levels must be provided on the basis of a particular PSAP service area. APCO and its Project LOCATE are currently examining this issue further, and hope to provide the Commission with additional recommendations in the near future.

B. Providing Accuracy Data to PSAPs

Regardless of the geographic area over which accuracy is measured, it is critical for PSAPs to know just how accurate the information is that they do receive. Despite some carrier’s fears, this is not to permit PSAPs to pursue enforcement actions against noncompliant carriers. Rather, PSAPs need to know the level of E9-1-1 accuracy to facilitate appropriate dispatching of emergency responders. For example, responders need to know what to do if they arrive at the “wrong address” or are unable to see the emergency upon arrival. If the call was delivered with a high degree of accuracy, the search for the actual emergency can be narrowed without requiring additional personnel. However, if the accuracy levels are actually low, then responders need to be prepared for a wider area search, and additional scarce resources may need to be dispatched.

We urge the Commission to clarify that carriers must be required to provide PSAPs with accuracy data, at least upon the PSAP’s request. How that information is transferred, its degree of granularity, and its frequency of reporting, are issues that can be resolved through ongoing industry/public safety discussions. However, those discussions are unlikely to proceed in a productive manner absent clear direction from the FCC regarding the fundamental obligation of carriers to provide accuracy information data to PSAPs.

CONCLUSION

Therefore, for the reasons set forth above, we urge the Commission to clarify the geographic area over which a wireless carrier must provide the levels of 9-1-1 location accuracy specified in the Commission’s rules, and the degree to which carriers must provide accuracy data to relevant PSAPs.

Respectfully submitted,

/s/

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October 6, 2004



Project LOCATE

Appendix D. Quorum Resolution

RESOLUTION 2007

INTENT: To request the APCO Board of Officers to re-emphasize the need for immediate and favorable action by the FCC on the APCO Petition for Declaratory Ruling

NAME of the MAKER: Project LOCATE

WHEREAS, The deployment and effective operation of wireless enhanced 9-1-1 is crucial to the public's safety; and

WHEREAS, Effective leadership is needed to advance the continual improvement of deployed wireless enhanced 9-1-1 systems; and

WHEREAS, APCO International is a national leader in public safety communications issues involved in advocating for the improvement of enhanced wireless 9-1-1; and

WHEREAS, The APCO International Executive Council has determined that coordination of wireless enhanced 9-1-1 deployment and operation is a priority for the Association by creating Project LOCATE; and

WHEREAS, Project LOCATE has coordinated Association and industry activities related to supporting the deployment and improving the operation of wireless enhanced 9-1-1 throughout the country; and

WHEREAS, In 2004, APCO International filed a Petition for Declaratory Ruling with the Federal Communications Commission addressing the measurement of accuracy in deployed enhanced 9-1-1 systems; and

WHEREAS, Project LOCATE has undertaken a variety of activities to examine the effectiveness of deployed enhanced wireless 9-1-1 including a comprehensive testing project in selected markets across the country; and

WHEREAS, Project LOCATE has concluded its testing project and has made specific operational and policy recommendations to the APCO Board of Officers;
Now, therefore, be it

RESOLVED, That the APCO membership quorum, here assembled, strongly encourages the Board of Officers of APCO International to seek positive action by the Federal Communications Commission to rule in favor of the APCO 2004 Petition for Declaratory Ruling, specifically Section IIIA of the NPRM.

Adopted by unanimous vote by the APCO International quorum, August 5, 2007, Baltimore, Maryland.

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Notes



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Locate

Locate Our Citizens At Times of Emergency

APCO International
Association of Public-Safety Communications Officials - International, Inc.

