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INSIDE: THE LEADERS OF 9-1-1 AND ITS INCEPTION | NG9-1-1 IS NOW A MATTER OF WHEN, NOT IF

The Call

THE OFFICIAL PUBLICATION OF NENA:
THE 9-1-1 ASSOCIATION

ISSUE NO. 26

NENA CELEBRATES



A CELEBRATION OF THE HISTORY OF 9-1-1

February 16, 2018 marked the 50th anniversary of the first 9-1-1 call in the United States.
NENA looks back on the history of our nation's emergency services system.

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THE 9-1-1 ASSOCIATION

Issue No. 26

The official publication of the
National Emergency Number Association
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Alexandria, VA 22314
202-466-4911 | www.nena.org

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Published by

NAYLOR
ASSOCIATION SOLUTIONS

5950 NW First Place
Gainesville, FL 32607
800-369-6220 | www.naylor.com

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PUBLISHED APRIL 2018/NEN-Q0417/4867

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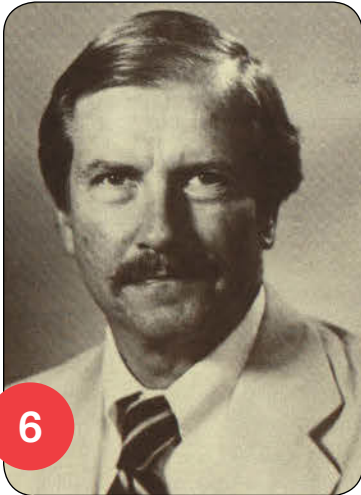
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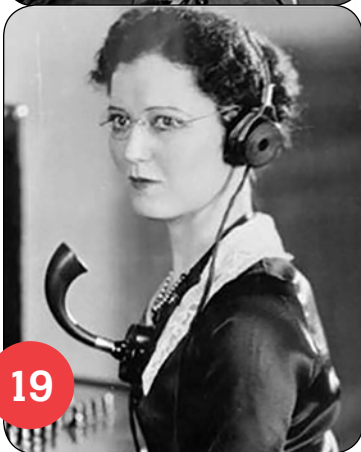
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Rob McMullen
NENA President

NG9-1-1 is Now a Matter of When, Not If

From the days of rotary phones and copper wires in the 60s and 70s, to wireless phones in the 90s, to smartphones today, thousands of unsung heroes have worked tirelessly to ensure that 9-1-1 is always there for those in need of emergency assistance. However, every 9-1-1 professional is painfully aware that our current systems are aging and imperfect. Recent disasters including hurricanes, wildfires, and mass shootings have brought a variety of shortcomings into focus.

All of the major telecommunications companies are moving rapidly to Internet-Protocol-based networks, and the federal government is funding and developing a wireless broadband network for public safety field responders. That leaves our 9-1-1 centers as the weakest link in the chain. The need to migrate the nation's 9-1-1 system to an IP platform becomes increasingly clear when you consider that the citizens we serve assume they can send text, images, and videos to PSAPs, the overwhelming majority of which actually are still only capable of handling voice communications today.

By now I think that everyone in 9-1-1 agrees that Next Generation 9-1-1 can no longer be thought of as an "if," only a "when." And in large part, that "when" is going to be up to us, both as members of NENA and as 9-1-1 leaders in our communities.

NENA continues to evolve the standard that lays out the roadmap of NG9-1-1, entitled *NENA Detailed Functional and Interface Standards for the NENA i3 Solution*. The i3 standard supports end-to-end IP connectivity. Gateways are used to accommodate legacy wireline and wireless origination networks that are non-IP. NENA i3

introduces the concept of an Emergency Services IP network (ESInet), which is designed as an IP-based inter-network (network of networks) that can be shared by all public safety agencies that may be involved in any emergency. The i3 PSAP is capable of receiving IP-based signaling and media for delivery of emergency calls conformant to the i3 standard. In short, i3 is a big deal. It is universally accepted by PSAPs, 9-1-1 authorities, states, regional authorities, and private-sector companies as *the* standard for NG9-1-1.

While there is agreement about the need for NG9-1-1, exactly how to make the transition continues to be a topic of debate, and it is unlikely that there will ever be a one-size-fits-all solution. While many of our private-sector industry partners are working hard to deliver next-generation products and services, questions regarding additional standards work, operational impacts, and funding threaten to slow the adoption of NG9-1-1.

And while there are no easy answers, NENA's i3 standard (along with an ever-increasing suite of NG-related documents) is in place to make sure you have the information you need to bring standards-based, interoperable NG9-1-1 to your community and help move our industry forward.

With 2018 being the fiftieth anniversary of 9-1-1, now is a time to reflect on how we've far we've come – and how much further we must go. It will take years of concerted efforts to bring our 9-1-1 infrastructure fully into the 21st century and keep up with the next fifty years of innovation. However, it is something we simply have to do, and it is up to us to do it. Millions of callers can't wait. ●



Brian Fontes
NENA Chief
Executive Officer

On February 16, 2018, we celebrated the fiftieth anniversary of the first 9-1-1 call in the United States. Articles in this edition of *The Call* highlight and celebrate the incredible history of 9-1-1. It is hard to assess the monumental contribution 9-1-1 has made to saving lives and helping those in need over the past five decades. However, the Federal Communications Commission has estimated that 10,000 lives could be saved each year if the emergency dispatching system (9-1-1) could get help one minute sooner to those calling for emergency assistance. With that statistic in mind, I believe that as we celebrate the fiftieth anniversary of that first 9-1-1 call made in Haleyville, Alabama, we must also recommit to improving our nation's 9-1-1 systems.

What should be the key goals, components, and metrics of our renewed efforts to strengthen 9-1-1 in the 21st century? Certainly, the end goal is better service to the public when they need it the most. Ensuring 9-1-1 calls are routed to the geographically appropriate 9-1-1 center and that accurate caller location information – regardless of where the call is coming from – is provided to the call taker would go a long way towards providing better help more quickly.

As the role of the 9-1-1 center and those professionals who work therein evolves, perhaps the associated nomenclature will change as well. We may very well see Emergency Response Operations Centers (EROCs) staffed by

Fifty Years and Moving Forward

Emergency Response Specialists pushing and pulling data and coordinating efforts with field responders over interoperable networks like NG9-1-1 and FirstNet. The days of siloed communications are over, and the next fifty years will only see more information-rich communications with the EROC as the hub of it all, no matter how the request for service enters the center, or how the response is mobilized.

All public safety practitioners will be affected by the increase of information associated with any 9-1-1 call. Consumers' communications with 9-1-1 will be one source of data, while the ability to tap into other databases pertinent to each 9-1-1 call will help 9-1-1 professionals deliver the most appropriate response to the 9-1-1 caller (or texter, or app user). While data and computer- and human-assisted analytics have significant lifesaving implications, we will need to reconsider and revisit data retention policies associated with 9-1-1 calls, as well as the training necessary for 9-1-1 professionals to work in a data-centric 9-1-1 world.

Changes in systems capable of delivering information associated with 9-1-1 calls, as well as "traditional delivery" networks themselves, will be forced to change in order to keep pace with the evolution – perhaps even revolution – in technology. These changes in technology have implications on all aspects of 9-1-1 service including one that cannot be overlooked: public policy. As history has proven, technology advances more quickly than public policy. Will the changes in networks and information systems enabling better location, routing, data flows, etc., be enabled or harmed by regulations? This will be a challenge. Whenever there are

public policy proceedings there is usually uncertainty and delay, which can negatively affect market decisions, including investment in 9-1-1.

As we move into the next fifty years, federal funding for Next Generation 9-1-1 would be a substantial boost to improving service to the public nationwide. Efforts will be made to move legislation forward. At this moment, there are bills in both the House and Senate, but there is much work to be done before a signed bill that would meet NG9-1-1's funding needs becomes law of the land.

Finally, work continues on getting Next Generation 9-1-1 deployed at the regional and state levels. The foundation for these efforts is NENA's i3 standard. The i3 architecture is used in the overwhelming number NG9-1-1 plans in the U.S., as well as in Canada's nationwide plan and the overall European approach to NG systems. However, i3, and all other NG-related standards must be living documents that continue to evolve. We have seen how static and inflexible systems have led to the challenges we face today. We must ensure that Next Generation 9-1-1 is flexible, adaptable, and resilient in ways that E9-1-1 is not if we want 9-1-1 to keep pace with what technology will make possible over the next five decades.

As we move into the next fifty years of 9-1-1, let's go forward with the conviction of our past and serve the public in new and innovative ways. Renew your commitment to the profession and engage in shaping the future of emergency communications so that the 9-1-1 professionals of 2068 are able to look back to us as the ones who fulfilled 9-1-1's promise. ●

THE LEADERS

FROM ITS INCEPT

By NENA Historical Committee - 50th Anniversary

Since the inception of 9-1-1 services more than fifty years ago, there have been thousands of individuals and hundreds of companies/organizations that have contributed to the advancement, implementation, and provisioning of 9-1-1 in the United States. While it is impossible to chronicle the contributions of everyone who has made a difference protecting the lives and property of those in danger through 9-1-1, we have identified the top twelve individuals, companies, and organizations that have been seminal, in our view, to the success 9-1-1 has enjoyed since that first call in Haleyville, Alabama, on February 16, 1968.

We are also listing the next thirty-eight individuals and/or businesses and organizations that we feel personify significant achievements in 9-1-1 during the first fifty years.

We are sure that some people, businesses, and organizations have been omitted, although not purposely. Those not recognized on our list also contributed to the advancement, implementation, and provision of 9-1-1 services in the past fifty years. For their efforts, we are grateful.

The following individuals and/or organizations are listed in alphabetical order.



Mary Boyd: Boyd started her career in 9-1-1 as a manager in Texas in the 1980s before serving as executive director of the Texas Commission of State Emergency Communications for 10 years. Throughout her career, Boyd has been actively involved in public policy issues through numerous

working groups on 9-1-1 issues, including extensive work on the FCC Docket 94-102, which established the framework for wireless 9-1-1. She is recognized as a subject matter expert on 9-1-1 issues having testified before Congress on a number of seminal issues that affect 9-1-1. Throughout her career in 9-1-1, Boyd has served in many industry leadership roles as well as Chair of FCC working groups, focusing on issues such as optimal PSAP architecture and most recently committee work on the NG9-1-1 Reliability and Resiliency Taskforce and FirstNet regulatory issues. She was actively involved in the development and adoption of the NENA i3 NG911 standard and continues to contribute to that effort today. She has held both state and national leadership positions

throughout her 40 years of 9-1-1 service, most notably as NENA National President in 1986. She was granted the William E. Stanton Lifetime 9-1-1 Achievement Award by NENA in 2017 and is a member of the NENA Hall of Fame.



Dr. Jeff Clauson: In 1976, a young doctor in Salt Lake City, UT, realized that many of the 9-1-1 calls that were being delivered to 9-1-1 dispatch centers across the nation were of medical nature. He also realized that although there was an Emergency Medical Call Protocol tree established by the National

Highway Transportation Safety Administration (NHTSA), it did not recommend a systemized and protocol-based interrogation of the caller or provide a method to determine the priority of medical response needed. Therefore, he customized the NHTSA EMD program to address these areas and initially used the system to support EMS dispatch in Salt Lake City. His lifelong advocacy of protocol-driven call handling of EMD has resulted in 90 percent of U.S. PSAPs using EMD protocol, along with a large number of states requiring EMD for medical response. Many PSAPs also use protocol-driven interrogation for fire and police calls. Known at the "Father of EMD" in the U.S., Clauson has made a significant contribution to timely and accurate 9-1-1 response through his work, increasing the safety of Americans.



Jack Fuller: In any industry, there is a starting point where people see a new challenge and then use their talent, their skills, and sometimes their own money to provide solutions. In the early days of 9-1-1, telephone switching gear was not developed to address the call-routing scheme of three-digit

numbers. Two ATT employees, Paul Simek and Mike Crews, developed the switching equipment needed. Since the general consensus was that 9-1-1 would only be implemented in large cities, ATT was reluctant to produce the equipment with such a limited market. Fuller saw this as a business opportunity which resulted in his existing company, Plant Equipment, producing the 9-1-1 equipment and then selling it back to ATT, as well as others in the industry, to market to PSAPs. After being the middle man in the provisioning of the 9-1-1 equipment and seeing that 9-1-1 was gaining a much larger market, Fuller started selling

OF 9-1-1 ION TO PRESENT

the PSAP equipment, MARS 9-1-1 phone systems, directly to the customers. Fuller and his team of technicians developed many innovations in 9-1-1 phone systems through the years before the family business finally was acquired by new investors that renamed the company Plant/CML and then Airbus.



Robert (B. W.) Gallagher, Alabama Telephone Company & Haleyville: Gallagher was president of the Alabama Telephone Company when he learned that Lyndon Johnson's 1967 "President's Commission on Law Enforcement and Administration of Justice" report had recommended the

establishment of a single emergency number. In January 1968, ATT decided the three-digit emergency number would be 9-1-1. Gallagher observed that the technical team at the Alabama Telephone Company showed great interest in this new initiative. As with many ideas, there was a race toward implementation. This was the case with Gallagher, the Alabama Telephone Company, local political leaders, and the Haleyville, AL, team, who all wanted to be the first to deliver a 9-1-1 call in the U.S., as well as beat AT&T to the punch. The Alabama Telephone Company technical team, led by Gallagher and inside plant manager Robert Fitzgerald, evaluated the Alabama Telephone Company's 27 phone systems and decided that Haleyville would serve as an ideal site location. They fast-tracked the initiative, designing the system and network that would process this new number after-hours each day and on weekends. Their efforts paid off: At 2 p.m. on Feb. 16, 1968, the first successful 9-1-1 call was made by Alabama Speaker of the House Rankin Fite from the Haleyville Mayor's Office through the Alabama Telephone Company switching center to U.S. Rep. Tom Bevill, who was sitting in the Haleyville police station. This became a seminal event in the implementation of 9-1-1; validating a great idea to improve public safety response time during an emergency.



Scott Hovey: During the early years of 9-1-1, the delivery of a 9-1-1 call was directed to a dispatch center within the phone company's central office area. Many 9-1-1 calls had to be rerouted to the correct center for dispatch, adding seconds and affecting rapid and timely response to the caller. A

team from the St. Louis Police Department technical bureau, led by Harvard graduate Scott Hovey, saw this delay in delivery of 9-1-1 calls to the correct PSAP as something that needed to be corrected, and the team worked to develop a solution. The "St. Louis Solution" was recognized by Roger Reinke through his involvement with NTIA as an interesting concept. Thereafter, a federal LEAA grant was awarded to ATT to conduct trials of the St. Louis PD's "selective routing solution." The City of Alameda, CA, was chosen to be the test bed for the proof of concept for the St. Louis Solution. As a requirement of the grant, Scott Hovey was named project manager, which required him to move his family from St. Louis to California. In 1973, the successful completion of the pilot proof of concept project was completed, which we now call Selective Routing and led to enhanced 9-1-1 services. The contribution that Hovey made to this new technology has stood the test of time and is credited as one of the most important technological developments that reduced the time it takes for 9-1-1 calls to arrive at the proper PSAP. Hovey was recognized as the second recipient of the NENA Founders Award and is a NENA Hall of Fame member.

IAFC: No organization did more to make a three-digit emergency number a reality in the U.S. than the International Association of Fire Chiefs. The IAFC began the push for 9-1-1 across the U.S. in 1957, with a focus on educating the federal government on the importance of a three-digit number that would be available nationwide to summon police or fire emergency response in a time-efficient manner. Finally, in 1967 the President's Commission Report agreed with the IAFC and recommended the establishment of one three-digit number for summoning police or fire aid in an emergency. Shortly thereafter, on Jan. 12, 1968, AT&T announced they would start implementing the new 9-1-1 number nationwide as the universal emergency number.



Nathan Lee: Throughout the development of 9-1-1, a common theme has been debated: 9-1-1 dispatcher training. Early on, then FCC Chairman wrote a letter concerning his fear that 9-1-1 would not be accepted by the American public as "the" emergency number unless there was good training for those who answered the public's call for help.

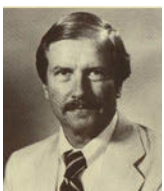
Until 2009 there were fewer than 20 states in the U.S. with mandatory and/or voluntary 9-1-1 dispatcher training, and Florida was not one of them.

Then, in January 2008, the tragic death of a young Florida mother of two, Denise Amber Lee, started a chain of events that changed the landscape of mandatory 9-1-1 dispatcher training. Shortly after her tragic death, Nathan Lee, Denise's husband, started the Denise Amber Lee Foundation with a primary focus and mission to raise awareness of the lack of formalized dispatcher training and quality assurance of 9-1-1 dispatchers nationwide. In the past 10 years Nathan has travelled the nation with Denise's story and has made a significant impact on this area. Nathan and the foundation have contributed to the establishment of an industry best practice through the Dispatcher Minimum Training Guidelines as well as the NENA/APCO/DALF ANSI Standard for Quality Assurance.

Through his impassioned presentation of Denise's tragic death and the mistakes made by 9-1-1 in that incident, Nathan has been instrumental in the passage of mandatory legislation for dispatcher training in four states, including Florida, that passed the 232-hour mandatory dispatcher training law – the Denise Amber Lee Act. Furthermore, there are 13 additional states working on mandatory dispatcher training as a direct result of Nathan's efforts. In 2010, Lee was recognized by the E9-1-1 Institute as their 9-1-1 Advocacy Award winner.



Norman Forshee: A former NENA National President in 2000, Forshee was public safety manager of a county 9-1-1 system. He worked on early developmental structure for CAD systems in Florida while serving as director of communications. He became a strong PSAP voice and advocate while working with both federal and state legislative and regulatory agencies. He championed the drive to force wireless carriers to implement Phase II technology in a timely manner through formal complaint actions with the FCC. He was instrumental in the first PS/ANI laws with PBX systems. Furthermore, he implemented the first wireless Phase II 9-1-1 call in the nation at the St. Clair County, IL, PSAP in October 2001, for which he was recognized by Senator Hillary Clinton. Forshee is a recipient on the NENA William E. Stanton Award for Lifetime 9-1-1 Achievement in 2008 and is a member of the NENA Hall of Fame.



Roger Reinke: Without the focused and dedicated leadership of Reinke, who is recognized as the "Father of 9-1-1 in America," 9-1-1 would have floundered in the early years and may not have been as widely implemented as it is today. Reinke worked for the National Telecommunications

and Information Administration (NTIA), and was assigned by the federal government to direct the development of 9-1-1. Through the NTIA, he directed and shepherded 9-1-1 through the federal and state maze of regulations instrumental in the

development of 9-1-1 as not only an idea, but one that was embraced and implemented throughout America.

In the early days of 9-1-1, between 1966 and 1976, Reinke played a pivotal role in securing federal funding through the Law Enforcement Assistance Administration (LEAA), highway programs, Safe Streets Act, and Emergency Medical Services Act for early 9-1-1 awareness campaigns, public education, proof of concept projects, policy development, public safety training through national and regional conferences, as well as implementation costs for public safety dispatch centers to become early PSAPs.

Reinke was instrumental in founding the National Emergency Number Association (NENA) and is one of the three original signatures on the National NENA incorporation documents. He was recognized by NENA as the first recipient of the NENA Founders award, and was named to the NENA Hall of Fame for his significant contributions to the advancement and development of 9-1-1 systems in the 1970s and 1980s.



Jeff "Gunney" Rogerson: Rogerson, one of the original signatures on the NENA incorporation documents, was the compass in keeping the new members of NENA (the 9-1-1 Association) focused solely on 9-1-1 issues in the early years of the association.

He worked on various NENA development committees and addressed establishment of the bylaws and governing procedures of the newly formed association.

It is not hard to say that without the focused leadership of Rogerson in the early years of NENA, the association may have drifted from its core values and would not have developed into the association that it is today; solely focused on 9-1-1 technical standards, operational best practices, legislative, and regulatory issues as well as 9-1-1 public safety awareness and training. NENA has developed from an association of one state chapter in Illinois to chapters throughout North America, including Canada and Mexico, as well as intentional affiliated chapters today. NENA technical standards are recognized not only in the U.S. but throughout the world. Many NENA technical standards have been adopted as "build to" standards by the 9-1-1 industry and many of those standards and operational best practices are recognized by governmental entities in legislative and regulatory language throughout North America, a lasting tribute to the early direction that Rogerson provided during the formative years of NENA, the 9-1-1 Association.

An employee of Illinois Bell Telephone, Rogerson was instrumental in the advancement and development of 9-1-1 centers throughout the state of Illinois and the establishment of governing rules for 9-1-1 with the Illinois Commerce Commission that served as model regulatory rules for other states to follow as they implemented 9-1-1 services. Rogerson, along with Roger Reinke, was instrumental in establishing the first 9-1-1 conference that was funded by LEAA in Chicago, IL, in 1977 and 1978; in

Minneapolis, MN, in 197; in Tulsa, OK, in 1980; and in St. Louis, MO, in 1981. In late 1981, the Carter Administration ordered that LEAA funding for 9-1-1 be terminated, as well as the majority of federal support for the issues facing 9-1-1. It was during this time that the National Emergency Number Association (NENA) was formed with the first NENA association being a state association in Illinois. In early 1982, Rogerson convinced Illinois Bell Telephone Company to be the primary sponsor for the first NENA 9-1-1 conference held in St. Charles, IL. Rogerson was given the William E. Stanton Lifetime 9-1-1 Achievement award in 2006 and is a member of the NENA Hall of Fame.



SCC/Intrado: George Heinrichs (left) and Stephen Meer (right) are two of the visionaries of 9-1-1 who started their illustrious careers in public safety while sheriff's deputies in

Boulder, Colorado. They went on to build a company that became known as Intrado™. Their vision, especially in network security and data reliability, set a new bar for excellence in 9-1-1. In 1985 the two young police officers left the Boulder County Sheriff's Office and started SCC aimed at providing mainframe solutions to telephone companies to manage 9-1-1 systems. In 1993, that business model evolved into what we now call "managed services" where data services were offered to phone companies that managed 9-1-1 data records. The core product was software that allowed for faster correction of database errors of the 9-1-1 Master Street Address Guide (MSAG) that phone companies used to manage 9-1-1 data. This successful partnership laid the foundation for 30 years of creative and innovative 9-1-1 software solutions by these two visionaries. SCC, and later Intrado (with George as CEO, and Stephen as CTO) established an industry standard of excellence

in 9-1-1. During the past 30 years SCC/Intrado has delivered a multitude of sophisticated software solutions with a primary focus on data integrity, design of fault tolerant dispatch systems and policy development work in wireless 9-1-1 deployment, most notably their work in passing the Wireless Communications and Public Safety Act of 1999 which provided wireless carriers with liability protection on par with wireline carriers. Additionally, both individuals were heavily involved in legislative and regulatory issues that challenged the delivery of 9-1-1 services, notably in the passage of the Enhanced 9-1-1 Act of 2004, FCC Docket 94-102, as well as the development and adoption of the NENA i3 standard for Next Generation 9-1-1. Their contributions to 9-1-1 reliability are vast and both have won numerous awards, including Heinrichs receiving the William E. Stanton 9-1-1 Lifetime Achievement Award from NENA. Meer was recognized by Ernst and Young in 2005 as their Entrepreneur of the Year for Technology.



Bill Stanton: William E. Stanton spent more than forty years in the service of 9-1-1, beginning as the 9-1-1 service manager with Ohio Bell in the early 1980's, then serving on the NENA board and becoming NENA's first full time Executive Director in 1989. Bill was instrumental in the establishment of the Emergency Number Professional (ENP) certification and advocated for NENA to open a legislative office in Washington, DC to address federal rules, policy and legislation. He promoted the advancement and implementation of numerous 9-1-1 systems and appeared before Congress promoting legislation and regulation of 9-1-1 issues. During his tenure, NENA grew from 1,500 members to more than 6,000 with chapters throughout the US and Canada. The William E. Stanton Lifetime 9-1-1 Achievement Award was named in his honor, with Bill being the first recipient in 1999. He is also a member of the NENA Hall of Fame. ●

THE REST OF THE BEST IN 50 YEARS

Here is a look at thirty-eight other people, organizations, and companies that comprise those most instrumental in the conception and development of 9-1-1 during the past fifty years.

- 1. AT&T** – Without the aggressive approach to the roll out of emergency dialing services, as well as choosing the new emergency number to be 9-1-1 in January of 1968 – only a few months after the Presidential Report in 1967 which urged the creation of a single, universal emergency number – the reality of 9-1-1 gaining public acceptance and implementation by early dispatch centers may have floundered.
- 2. Evelyn Bailey** – She was the executive director of the State of Vermont 9-1-1 Board for ten years until becoming a consultant focused on 9-1-1 service and provisioning issues. She chaired the U.S. Department of Transportation's Wireless E9-1-1 Steering Council, which produced an industry consensus priority action plan for wireless E9-1-1 deployment. She has served on numerous FCC working groups that relate to regulatory
- 3. Greg Ballentine** – Former International President in 2004, Ballentine was noted for his drive to improve wireless 9-1-1 location accuracy issues. He is an APCO lifetime member.
- 4. Thera Bradshaw** – Former National NENA President in 1994 as well as APCO International President in 2002, she is a long advocate of 9-1-1, having testified before Congress on 9-1-1 issues. She has been instrumental in managing 9-1-1 in several major cities as well as implementing NG911 in Hawaii. She is a NENA Hall of Fame member.
- 5. Tom Breen** – An employee of Bell South, Breen was a long-serving leader of the NENA technical committee who worked on network and technology issues that challenge 9-1-1 delivery, both for wireline and wireless 9-1-1 calls. He served on the FCC's Optimal PSAP Architecture working group. Breen was recognized by NENA when given the

William E. Stanton Lifetime 9-1-1 Achievement Award in 2007, and also is a member of the NENA Hall of Fame.

6. **Toni Dunne** – A steadfast advocate on 9-1-1 accessibility issues that present themselves to persons with disabilities in accessing and using 9-1-1 services. Widely accepted throughout the industry as a subject matter expert on ADA and the PSAP, Dunne has authored numerous articles and given presentations as well as a testimony before Congress on disabled persons' access to 9-1-1 services.
7. **E911 Caucus** – Founding members included Sen. Conrad Burns (R – ID), Sen. Hillary Clinton (D – NY), Rep. Anna Escho (D – CA), and Rep. John Shimkus (R – IL); a bicameral, bipartisan group that continues to advance legislation aimed at improving 9-1-1 services for the citizens of America and PSAPs nationwide.
8. **Federal Agencies** – Long-time support and early funding for 9-1-1 from 1966 –1976, these agencies continue to offer support and funding as directed by Congress for the advancement of Next Generation 9-1-1.
 - Law Enforcement Assistance Administration (LEAA)
 - National Telecommunications Information Authority (NTIA)
 - Federal Communications Commission (FCC)
 - National Highway Traffic Safety Administration (NHTSA)
 - US Department of Transportation (USDOT)
 - US Department of Commerce (USDOC)
9. **Laurie Flaherty** – A long-time public policy advocate for 9-1-1 services while serving in various roles with the U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), and most recently as the Director of the US 9-1-1 Program Office offering grant assistance for NG 911 services.
10. **Brian Fontes, Ph.D.** – Fontes was legislative affairs director for Cingular and AT&T Wireless for 9-1-1 issues until 2008, when he became the first Chief Executive Officer of NENA, establishing a new governance model for NENA in regard to advocacy and representation of 9-1-1 issues before the U.S. Congress, the FCC, and other federal agencies. Chiefly responsible for taking the idea of Next Generation 9-1-1 to reality.
11. **Red E. Fox™** – Mascot for 9-1-1 for Kids training program used extensively throughout the U.S. in educating school-aged children about the proper use of 9-1-1.
12. **James Goerke** – Goerke began his career in 9-1-1 with the NE Texas Council of Governments, where he served until he was chosen as deputy director and then director of the State of Texas 9-1-1 Program office. Following a distinguished tenure, he was named the executive director of the Texas 9-1-1 Alliance in 2007, where he continues to serve. A longtime advocate of 9-1-1, Goerke has served on the NENA Executive Board and as interim executive director of NENA, as well as on numerous standards committees. He has worked with the FCC and the Traffic Safety Advancement Group with USDOT, is a recipient of the William E. Stanton Lifetime 9-1-1 Achievement Award, and is a member of the NENA Hall of Fame.
13. **Bob Gojanovich** – An employee of Verizon, Gojanovich worked primarily in Vermont and was actively involved in the development of 9-1-1 technical standards at the national level since 1993. He chaired the Network Technical Committee for the National Emergency Number Association (NENA) for 10 years and remains a strategic advisor to NENA's Development Steering Council. Gojanovich was given the William E. Stanton Lifetime 9-1-1 Achievement Award by NENA in 2003 and is a member of the NENA Hall of Fame.
14. **Patrick Halley, JD** – As the former Legislative Affairs Director for NENA, Halley has played an important role in the development of regulatory issues that affect 9-1-1 while working for the FCC, most recently as executive director of the E9-1-1 Institute.
15. **Bill Hinkle** – Former NENA National President in 1999, Hinkle is a well-respected 9-1-1 advocate in legislative and regulatory arenas who served as an advocate for the National Center for Missing and Exploited Children in establishing an ANSI Standard dealing with missing children. He is a member of the NENA Hall of Fame.
16. **Roger Hixson** – Hixson is a former Ohio Bell employee who worked on wireline 9-1-1 issues and became the technical director for NENA, a role in which he was pivotal in the evolution of 9-1-1 systems from analogue phone lines to Next Generation 9-1-1 over high speed internet.
17. **Henry "Hank" Hunt** – Hunt made presentations across the U.S. as he pressed Congress for the passage of Kari's Law after the tragic death of his daughter Kari Hunt Dunn, obtaining over 500,000 signatures supporting the successful passage of Federal legislation that eliminates dialing of 9 for an access line prior to dialing 9-1-1 in PBX phone systems used in many locations, including hotels and resorts in the U.S.
18. **Robert Wood Johnson II, (Johnson and Johnson Corp.)** – An entrepreneur who in 1972 donated \$15 million in grant money to assist rural America in implementing 9-1-1 services.
19. **John Kelly, J.D.** – A former police officer, Kelly is an industry expert in 9-1-1 law serving as legal counsel for the NENA executive board as well as the IL NENA executive board. He continues to teach 9-1-1 laws as they related to liability in the PSAP. He is a NENA Hall of Fame member.
20. **Will Little** – An industry partner who developed a mini computer screen that was used to show the Automatic Number Identification (ANI) to the 9-1-1 call taker/dispatcher and later also displayed the Automatic Location Information (ALI) from the phone carrier.
21. **John Melcher** – Former National President of NENA, in 2001 he implemented a national consortium called the Strategic Wireless Action Taskforce (SWAT) to evaluate wireless 9-1-1 call issues and challenges and to establish a path forward to address and find solutions to those challenges. He is a NENA Hall of Fame member.

- 22. Dick Mirgon** – As former ACPO International President in 2009, Mirgon was the First Joint Chair of the National Telecommunicator Emergency Response Taskforce (TERT) and the primary advocate from APCO in the successful drive to secure high-speed broadband spectrum in the D Block initiative and legislation. He is an APCO lifetime member.
- 23. National Associations** – These associations have placed a primary focus on addressing technical, operational as well as legislative and regulatory issues that affect 9-1-1 services in the U.S.
- National Emergency Number Association (NENA)
 - National Association of State Nine-One-One Administrators (NASNA)
- 24. Morgan O'Brien** – O'Brien is founder of Public Safety Spectrum Trust (PSST). He has a vision to move 9-1-1 calls from analogue phone lines to high speed, dedicated IP networks to support Next Generation 9-1-1 features. Through this vision and D Block legislation, he formed a foundation for the implementation of FirstNet for PSAPs nationwide.
- 25. Steve Proctor** – Former APCO International President in 1994, Proctor is a PSAP advocate appearing before the U.S. Congress on numerous occasions to promote public safety communications and 9-1-1 issues. An early member of NPSTC, he continues to be actively involved in 9-1-1 issues.
- 26. Richard Ray** – A lifelong advocate for improvements in the 9-1-1 system and operations as they relate to accessibility issues for those with physical impairments. Richard has testified before Congress and the FCC to strengthen regulations that provide equal access for those with disabilities in using 9-1-1. His passion has led to the enforcement of training in TDD by all PSAPs nationwide and the adoption of voice and video relay regulations as they relate to PSAP operations.
- 27. Rescue 9-1-1** – A TV show that aired from 1989-1996 by producer Robert Shapiro starring William Shatner. Shatner's appearances and narration on *Rescue 9-1-1* probably did more to raise awareness of the national 9-1-1 system than any other single endeavor. Many credit the designation by Congress in 1999 of 9-1-1 as the official emergency number in the U.S. as stemming from the awareness of 9-1-1 provided by the show.
- 28. Greg Rhode** – Rhode was the first executive director of the 9-1-1 Institute supporting the Federal E9-1-1 Caucus in Washington, D.C., focused on advancing 9-1-1 legislation to improve 9-1-1 services throughout the U.S.
- 29. Glenn Roach** – He has been actively involved in 9-1-1 since the mid 1980's fulfilling leadership roles that includes operations experience within a Public Safety Answer Point Operation (City of Houston) to serving in several State 9-1-1 Program leadership roles, as well as regional public safety advisory roles throughout the United States. The Regions and States that Mr. Roach has supported include, but are not limited to Texas, Massachusetts, Virginia and Hawaii, Mr. Roach has dedicated his professional career to advancing technologies and services of 9-1-1 to ensure that public safety telecommunicators, and first responders receive fast and efficient information in order to save lives and property.
- 30. Phil Salafia** – Salafia is a former Connecticut State Trooper who started PowerPhone, a training company solely focused on the role of the 9-1-1 call taker/dispatcher and how to properly prioritize the call through systemized interrogation of the caller, in 1985. The PowerPhone philosophy has been widely accepted, resulting in use of their training programs by PSAP personnel throughout North America and across the globe.
- 31. September 11, 2001** – The events of this day in U.S. history have had a profound effect on the importance of 9-1-1 and public safety communications initiatives throughout the country. This core incident identified the critical nature of PSAPs and 9-1-1 for survivability and reliability in all situations.
- 32. John Snapp** – John Snapp serves As VP of Technology for West's safety services division (formerly known as Intrado). Snapp has served the wireless industry since 1991 and holds 16 patents which include providing strategic direction and technical guidance on solutions involving wireless and wireless 9-1-1 call delivery. He was the chief architect behind the original solution for Text to 9-1-1 in the United States.
- 33. Steve Souder** – Souder is an innovative PSAP manager in Fairfax, VA, working on 9-1-1 training and education as well as legislative and regulatory initiatives at the state and federal levels. He is a well-known public speaker on new technology that affects the processing of 9-1-1 calls in the PSAP, as well as dispatch training standards.
- 34. Jim Voelkl** – Editor and founder of 9-1-1 Magazine, which since 1988 has offered articles on hot 9-1-1 topics, as well as various perspectives on issues facing 9-1-1 and PSAPs in North America.
- 35. Marilyn Ward** – A former APCO International President in 1996 who worked on a federally funded initiative called the Public Safety Wireless Advisory Committee (PSWAC) that examined the challenges of interoperability and led her to form the National Public Safety Telecommunications Council (NPSTC), for which she serves as executive director. She is an APCO lifetime member.
- 36. Charles Hugh Warren** – "Father of the 9-1-1 surcharge," he was a legislator who promoted passage of the 1973 Warren 9-1-1 Emergency Assistance Act in California. The act identified a surcharge on telephones as a preferred method of funding 9-1-1 services. The legislation served as a model for other states struggling with a revenue stream to fund 9-1-1.
- 37. Reginald Weiser** – An industry partner from Canada who developed 9-1-1 call handling and switching equipment that came to be known as Positron phone equipment used in more than 3,000 PSAPs.
- 38. Tom Wheeler** – A long-time advocate of 9-1-1, he was founder of the Cellular Telephone Industry Alliance (CTIA) during the early implementation of wireless 9-1-1 services and later as the FCC Chairman. ●



Trey Forgety
NENA Government
Affairs Director

THE TECHNICAL, POLICY, AND POLITICAL WORLDS AROUND US ARE CHANGING AT UNPRECEDENTED RATES. TO KEEP UP OVER THE LONG TERM, NENA WILL BE FORCED TO RECONSIDER LONG-HELD BELIEFS, CHALLENGE TECHNICAL ASSUMPTIONS, AND REACT TO NEW MARKET ENTRANTS AND NEW OPERATING PARADIGMS.

Hail and Farewell...

It is with fond memories and tremendous pride in the transformation of this organization that I write here for the final time. As I move on to new challenges and new adventures in my career, I want to thank each and every member of NENA who has helped me to navigate the challenges and adventures I have encountered here: I couldn't have done it without you!

During my tenure, NENA's membership has consistently backed policy positions that are founded in facts, built from deep technical proficiency, and sustained by a commitment to doing what's right for the public and the public safety community. On countless occasions, you have chosen to do what was right, even if it wasn't the easiest course. From the NG9-1-1 transition to wireless location accuracy, interim SMS-to-9-1-1, and Real-Time Text, we have had some tough fights, and some very, very big wins. Few government affairs directors have the luxury of advocating such positions, and I am grateful to you for this rare opportunity.

As I move on, I want to leave a few thoughts for the future, in the hope that they can help NENA to sustain the growth and success that you have made possible:

Lead aggressively. NENA is one of the most respected public safety organizations represented in Washington, largely because our members, Board, and staff choose to be leaders. Staking out positions before others do, sticking to what is right, and refusing to put the self-interest of the organization ahead of the interests of the public and the public safety community are traits that arise by design. Nurture them. Show up first, and be ready to fight.

Think independently. All too often, policy positions in associations are made by the loudest voices, without regard for the quality of the underlying arguments. Members, states, local 9-1-1 authorities, private companies, and other associations will always push NENA to adopt *their* point

of view. Sometimes, they'll push hard. Sometimes they'll bully and threaten. Always listen, but never cede. Experience has taught me that NENA's members include many of the brightest minds in public safety. Even when an issue is complex and its politics are fraught, our members can – and *will* – tackle them. Speak the truth, help each other, and stick to your guns.

Adapt quickly. The technical, policy, and political worlds around us are changing at unprecedented rates. To keep up over the long term, NENA will be forced to reconsider long-held beliefs, challenge technical assumptions, and react to new market entrants and new operating paradigms. From my first TDC/ODC to our latest engagements with Silicon Valley, we've made a point of *never* being the association of "no, stop, don't." This hasn't always made us popular with everyone in the public safety community, but it has given us far wider influence over the direction of new technologies than others have enjoyed. Keep that up. Keep an open mind; think in how's, not in why not's; and change fast.

Staff smartly. I was hired with no prior experience in a public safety profession. Though I had served as a policy wonk on public safety issues, there are some associations that wouldn't have cared. With narrow exceptions, however, this should be the norm. Too many times, associations hire from within their membership, and are handicapped because of it. The work of an association is materially different from the work of a PSAP or a private company or a government agency. Remember that. Hire for the job, not for the politics.

Keep in touch! I may be leaving NENA, but part of me will always belong to public safety. If I can ever be of assistance to you or to your agency, please reach out.

Thank you *all* for seven wonderful years, and the precious opportunity to make an impact. *Fair winds and following seas*, -Trey ●

50 YEARS: 9-1-1 GROUNDED IN PUBLIC POLICY

By Mary A. Boyd, ENP

Advancing and improving 9-1-1 requires a thorough understanding of how public policy played a historical role in the establishment of the emergency number. We also must understand the critical roles that state laws and federal regulation have played in creating deployment timeframes, system standards, and most importantly the funding of 9-1-1 systems. Recognizing the 50th anniversary of our 9-1-1 emergency telephone number, I think it only fitting to recap how public policy enacted at all levels of government has established our past and continues to influence our 9-1-1 future.

1957: National Association of Fire Chiefs

The concept of a single emergency number was officially introduced in the United States by the National Association of Fire Chiefs when the association recommended the use of a single number for reporting fires.

1967: The Challenge of Crime in a Free Society

While the National Association of Fire Chief's was an advocate of an efficient emergency number, it was a Presidential directive that formalized the recommendations. On July 23, 1965, recognizing the urgency of the Nation's crime problem, and the depth of ignorance about it, President Lyndon Johnson established the Commission on Law Enforcement and Administration of Justice, through Executive Order 11236.¹



The result was the report entitled *The Challenge of Crime In A Free Society*, and a recommendation that set the stage for a single emergency number for the United States.

By 1967, 19 commissioners, 63 staff members, 175 consultants and hundreds of advisors issued the report about crime in America that encompassed information about those who commit crimes, the victims, and proposed solutions to reduce crime. If you are a history buff and especially a law enforcement policing history buff this

300-page report is a fascinating and enlightening read.

The report contained more than 200 specific recommendations for preventing crime and creating a safer society. As part of the recommendations contained within the "Preventing Crime" section of the report, steps to reduce police response time were discussed and recommendation included, but were not limited to:

- Police Call Boxes should be left open and designated "public emergency callboxes"; and

- The Telephone Company should develop a single police number for each metropolitan area and eventually for the entire United States for reporting emergencies.

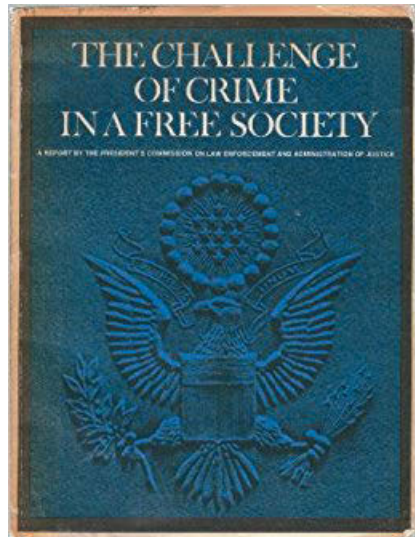
While the Commission was tasked with focusing on crime in America, they set the course for our country to embrace public policy decisions that have been adopted and modified throughout five decades and created emergency communications networks that have lead the world in advanced lifesaving technologies.

1968: American Telephone & Telegraph Designated 9-1-1

Following the publication of *The Challenge of Crime in A Free Society*, the American Telephone and Telegraph Co. (AT&T) in 1968 announced that its Bell Telephone System companies would adopt the three-digit number 9-1-1 as the nationwide emergency telephone number. Ben S. Gilmer, then President of AT&T, said the system is “in response to the expressed public need” for a common, easy-to-remember number for police, fire, ambulance and other emergency services. He said it will be designed to get “fast assistance in any emergency, regardless of the conditions.”²

1973: Executive Office of the President Issues National Policy Statement

On March 21, 1973, the Office of Telecommunications Policy, Executive Office of the President, issued a national



policy statement to federal agencies supporting 9-1-1. In May, 1973, the agency published the first form of guidance for community planning for the implementation of 9-1-1. Bulletin No. 73-1 addressed to the “Heads of Executive Departments and Establishments” directed the federal level agencies and provided information and guidance to be used in assisting state and local governments in implementing 9-1-1 expeditiously.³ With regard to policies and planning, the Bulletin set forth many valuable points and included recommendations such as:

- The primary purpose of implementing 9-1-1 was to enable citizens to obtain law enforcement, medical, fire, rescue and other emergency services quickly and efficiently as possible by calling the same telephone number anywhere in the Nation. A secondary

objective was to enable public safety agencies to satisfy their operational and communications needs more efficiently

- Responsibility for establishing 9-1-1 service was to reside with local government. “This is the level of government closest and most responsive to the beneficiaries of this service, and at which the need for most emergency services arises...”

1979: Suggested 9-1-1 Act for Local Government

Between 1966 and 1976 federal agencies provided funding through the Highway Programs; Safe Street Act, and the Emergency Medical Services Act, all of which encouraged states and local governments to support the deployment of 911 service as part of their targeted grant programs. However, its important to point out that during the seventies, several bills and resolutions aimed at implementing 9-1-1 were introduced into Congress – none were passed, which served to emphasize that the matter was considered to be a state action.

By 1978, nine states had 9-1-1 legislation including California, Louisiana, Illinois, Wisconsin, Minnesota, Florida, Pennsylvania, Georgia and Massachusetts. Recognizing that states were beginning to make progress on 9-1-1 legislation The National Telecommunications and Information Administration (NTIA) surveyed each State for a better understanding and analysis of both passed and failed legislation or resolutions. By July 1979, NTIA was able to publish their findings of the policy research specific to 9-1-1 and issued the *Status of Legislation Concerning 9-1-1*. The study also included suggested draft legislation for State consideration, known as *The 911 Emergency Telephone Act*.

The 911 Emergency Telephone Act, provided a public policy framework for state and local government that included:

- Definitions
- Establishment of 9-1-1 Service;

BETWEEN 1966 AND 1976 FEDERAL AGENCIES PROVIDED FUNDING THROUGH THE HIGHWAY PROGRAMS; SAFE STREET ACT, AND THE EMERGENCY MEDICAL SERVICES ACT, ALL OF WHICH ENCOURAGED STATES AND LOCAL GOVERNMENTS TO SUPPORT THE DEPLOYMENT OF 911 SERVICE AS PART OF THEIR TARGETED GRANT PROGRAMS. HOWEVER, ITS IMPORTANT TO POINT OUT THAT DURING THE SEVENTIES, SEVERAL BILLS AND RESOLUTIONS AIMED AT IMPLEMENTING 9-1-1 WERE INTRODUCED INTO CONGRESS – NONE WERE PASSED, WHICH SERVED TO EMPHASIZE THAT THE MATTER WAS CONSIDERED TO BE A STATE ACTION.

- Primary emergency telephone number (911);
- Methods of handling emergency telephone calls;
- Emergency Services to be included in the system;
- Pay telephone and dialing without a coin;
- State development of an overall 9-1-1 plan;
- Local agencies plans;
- Technical and operational standards;
- Funding
- Reports
- Effective dates and dates for timeline stages and for final implementation of 9-1-1.

Does the 1979 proposed 911 Emergency Telephone Act sound familiar to you? It should as it became the ultimate policy guide for many states. Having personal involvement with state legislative initiatives in the eighties and nineties, I must say that our early public safety policy advisors served us well.

1980's-1990's-2000: The 911 Act Takes Revisions

The NTIA's proposed 911 Emergency Telephone Act set the stage for many states to develop statewide and regional 9-1-1 planning initiatives. As NTIA recognized in its 1979 report, states would modify policy to fit the needs of the local communities. As technology advanced and governmental agencies had limited availability of general revenue funds for Enhanced 9-1-1 (E9-1-1), states began to introduce purposes 9-1-1 funding structures as part of their 9-1-1 policy agendas in the eighties. The early adopter states began a crusade that many States followed allowing for the funding and implementation of E911 technologies. However, much of the original 911 Emergency Telephone Act framework remained steadfast. By 1989 the dedicated 911 funding policy trend began to gain tremendous momentum and state 9-1-1 Coordinating entities were being established.

Policy, implementation and funding challenges were common among the



early state 9-1-1 programs and there was a desperate need for networking within the State 9-1-1 Directors. This need was met by the creation of the National Association of 9-1-1 Administrators (NASNA) in 1989.⁴ NASNA started with less than 10 states as members of the newly created support organization. The vision of NASNA was to help fellow 9-1-1 program administrators and that vision has certainly been achieved. Today, NASNA has representation from 46 states and one territory—and many of its members have laws that incorporate the framework that was created from the original vision of the 9-1-1 Emergency Telephone Act.

Technology and 9-1-1 Public Policy

Historically, 9-1-1 public policy and technology advancements historically have not coincided. As new consumer technologies have evolved, it's a

never-ending effort for 9-1-1 program offices to seek legislative change to their state's 9-1-1 legislation. The law amendments are necessary and allow the 9-1-1 programs to incorporate deployments and funding for advanced consumer technologies such as:

- Wireless
- VoIP
- Multiline Telephone Systems/ Enterprise Communication Systems (MLTS/ECS)
- GIS supported systems
- Next Generation 9-1-1 (NG911)

State and Federal Policy Partnerships

Ironically, our founding federal agencies that supported the need for nationwide 9-1-1 service in the late 1960s continue to support our states today with various programs and regulations. The NTIA and the National Highway

Traffic Safety Administration (NHTSA) partner to provide funding and education on 9-1-1. The National 911 Program's mission is to provide federal leadership and coordination in supporting and promoting optimal 911 services. This federal "home" for 911 plays a critical role by coordinating federal efforts that support 911 services across the nation.

The National 911 Program works with States, technology providers, public safety officials and 911 professionals to ensure a smooth transition to an updated 911 system that takes advantage of new communications technologies. It also creates and shares a variety of resources and tools to help support 9-1-1 systems.

Created by Congress in 2004 as the 911 Implementation and Coordination Office (ICO), the National 911 Program is housed within the NHTSA, at the U.S. Department of Transportation (DOT) and is a joint program with NTIA in the Department of Commerce.⁵

The Federal Communications Commission (FCC) also plays a very important role in establishing regulatory requirements on certain communications services that are within the Commission's federal jurisdiction. FCC rules support the needs of 9-1-1 programs and 9-1-1 authorities throughout the U.S., ensuring correct 9-1-1 call routing, location information, reliability of 9-1-1 networks, and sharing of recommended best practices.

Since the early nineties, the FCC has made a commitment to ensure

consumers have access to 9-1-1 services. That policy commitment still holds today with a dedicated team of professionals within the Public Safety and Homeland Security Bureau (PSHSB).⁶

Past and Future 9-1-1 Policy

I hope you've found this walk through 9-1-1 policy history enlightening. We must know where we came from in order to chart a path for the future, and we must constantly learning from the past in order to meet the opportunities of the future.

After fifty years of evolving 9-1-1 public policy, I believe we can adapt to technological changes, and I offer you my observations:

- State 9-1-1 policy shouldn't require constant tweaking to meet the needs of evolving technology and funding challenges.
- State policy frameworks need to be nimble. We need to address the technological changes that can impact a citizen's access to 9-1-1, as well as prepare for the implementation of advanced technologies within the 911 network.
- Federal funding programs and partnerships (with the States) for the NG9-1-1 networks needs Congressional attention. Fifty years ago, federal support launched our 9-1-1 national infrastructure. It's time we reinvest in the future.

The future of 9-1-1 will continue to be grounded in public policy. Throughout the United States, we see states active in advancing their laws to accommodate

changing technologies and planning for NG9-1-1. Congress has also drafted public policy focused on NG911. I'm optimistic that our policy officials will dedicate resources to ensuring all citizens and visitors have access to 9-1-1, regardless of the technology, and will provide public safety with the communications technologies that aid them in saving lives and property. ●

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Mary A. Boyd, ENP is Vice President of Regulatory, Policy and External Affairs for West's Safety Services and has over 30 years of public safety experience which spans government, public safety and the private sector. She has held many voluntary board positions with public safety associations. She is a former president of the National Emergency Number Association (NENA); a co-founder of the National Association of State 9-1-1 Administrators (NASNA). She currently serves on the boards of the NG9-1-1 Institute board of directors, the Industry Council for Emergency Response Technologies (iCERT) and is also active in the Associated Public-Safety Communications Officers Association (APCO). In 2014 Ms. Boyd received the National Emergency Number Association's William E. Stanton Award for lifetime achievement. She also holds an undergraduate degree from St. Edwards University, and has pursued advanced studies at Northwestern University, Kellogg School of Management.

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Improving Working Conditions is Critical to Hiring and Retaining in 9-1-1 Centers



Christopher Blake Carver
PSAP Operations Director

AS YOU ARE MORE THAN AWARE, THE BIGGEST CHALLENGE THAT MANY OF OUR CENTERS FACE IS FINDING PEOPLE TO ACTUALLY SIT IN THE SEATS, ANSWER THE CALLS, AND DISPATCH THE INCIDENTS. IT IS A PROFOUND TRUTH THAT UNLESS WE FIGURE OUT A WAY TO SOLVE THIS HUMAN CRISIS, LITTLE OF THE TECHNICAL AND OPERATIONAL ADVANCEMENTS THAT WE ARE EXPERIENCING WILL MEET THEIR POTENTIAL.

One of the most enjoyable parts of my job as NENA's PSAP Operations Director is visiting 9-1-1 centers of various sizes, shapes, and activity levels across the United States and beyond. This has led me to places big and small, where I've had conversations with 9-1-1 lifers and short-timers and taken part in more than a few "excited" debates on important issues and challenges that we face in our 9-1-1 community.

As you are more than aware, the biggest challenge that many of our centers face is finding people to actually sit in the seats, answer the calls, and dispatch the incidents. Unless we figure out a way to solve this human crisis, little of the technical and operational advancements that we are experiencing will matter much. Whether the dispatcher uses a rotary dial phone or the latest app to process a call, if they are not present in the operations center, then the technology becomes irrelevant to the outcome.

Sadly, this is not a new or unknown phenomenon. But after a few recent conversations, I think we have been missing something. Countless hours and many studies have attempted to find a magic bullet to address this problem. We learn about millennials, hoping to unlock some mystical insight about what will summon them to our doors and keep them inside. We try to recruit everywhere from the local coffee shop to the high school. We invest in training and conferences, try out stand-up desks, consoles that heat, and line the walls of our 9-1-1 centers with inspirational

posters. Yet still, the problem persists. I think it was Spock who said if you eliminate all the other possibilities, what is left, no matter how improbable, is the likely answer. I think it is time for us in the 9-1-1 profession to admit something that may be obvious to everyone but us: In far too many agencies the reason why we cannot attract people or hold on to them is that the job of being a public safety telecommunicator is just not a good one in the traditional sense. If you surveyed one hundred random people on the street about what makes a job desirable, do you think that a telecommunicator position would qualify as such?

Now, do not get me wrong. The job is important. It is meaningful and it has good things about it. However, many of us have to fall back onto principled arguments about what we do in order to justify why we keep doing it. I know of very few centers where people speak favorably about the pay, the hours, the benefits, or the working environment when they are asked why they work where they do. In my own experience in a large metropolitan agency, most employees would answer, "I am here for the pension," when questioned about the primary motivating factor behind their choice to stay. A few would probably talk about health benefits, and perhaps a handful more would cite the schedule, but not very many.

Out of the thousands of people I have met in 9-1-1 centers, only a few have ever said that their primary goal is to serve the public. This should not shock anyone.

Public service cannot pay a mortgage. Self-fulfillment cannot attend a child's soccer game. According to Maslow's hierarchy of needs, it is only when, and if, the basics are covered that people can even begin to consider things external to one's self as the motivating factors for their actions. As an industry and a community, if we in 9-1-1 do not get the basics down then the big picture will not matter.

We must learn from those who get it right. Several business magazines and publications share annual ratings of the best places to work in either a region or the entire country, often by industry. Look carefully at what those surveys reveal. The basics matter. Employees want to feel valued, engaged, and part of something bigger. But they also want fair pay, opportunities for job enrichment, training, and promotion – all of which help ensure they are able to meet their basic needs. Employees need fairness from their bosses, flexibility in scheduling, and steady leadership. These factors lead to employees feeling safe, trusted, and secure in their workplace. Workers cannot consider bigger picture issues unless these needs are met effectively. This list of what people

appreciate about high-performing companies and organizations is broadly consistent. Those of us in 9-1-1 leadership roles would do well to learn from these lists.

I have come to feel strongly that too many of our 9-1-1 organizations have a "take it or leave it" approach to their employees. Along the way, managers, directors, and chiefs start to assume that the value of public service that is inherent to working in 9-1-1 can somehow overcome all of the negatives. They dismiss ordered overtime, lack of job enrichment, working on holidays, traditional vacation selection processes, the stress of the job, and negative working environments as "it comes with the territory" side-effects, rather than challenges that require creative solutions.

That is an unfortunate way for any manager to look at his or her staff in any organization. In the field of 9-1-1, it takes years to develop a trainee into a high-performing dispatcher; we must learn the lessons necessary to cultivate and retain the very best. This is not an entry level job. It is a profession and it must be treated as such, by everyone

involved – from the newest TC to the thirty-year manager.

Thankfully, there are high-performing centers that grasp this important issue. They try new approaches to engaging their staff, improving working conditions, and making the 9-1-1 center a place where people want to work. The answers are out there if we know what questions to ask.

In 2018, I encourage every 9-1-1 manager, director, chief, and stakeholder to begin addressing this problem. Talk to the people that leave. Listen to them with an open mind to hear why they left. If (or when) they say something you do not like hearing, do not react defensively. Listen to what they share. It is likely that after three or four of these conversations a pattern will emerge. Document that pattern and then engage those who remain to come up with solutions.

Do not assume that what has always been must always be. Then, have the difficult conversations with the people that can make things better: the city managers, police and fire chiefs, union leaders. This is an all hands on deck issue and we do not have the luxury of being able to sit this one out. Will you need to ruffle some feathers or shine the light on some uncomfortable truths? Yes, you probably will. But this job is too important for us to suffer continuing declines in our retention rates and effectiveness.

Along the way, engage with the other members of the 9-1-1 community. Reach out to other agencies, those who are maybe doing better along with those who may be not as successful as you are. With the continued roll-out of NG9-1-1, new technologies, consolidation, increased concerns about liability, and so many other issues constantly in view, we can no longer afford to just assume that things can't be better. Let us all commit to work together to ensure 9-1-1 shows up on a future list of best places to work. ●

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THE HISTORY OF 9-1-1

LONGTIME NENA MEMBER AND FORMER DIRECTOR OF FAIRFAX COUNTY, VA 9-1-1, STEVE SOUDER, HAS CAPTURED THE RICH HISTORY OF 9-1-1 IN AN INTERESTING AND HIGHLY INFORMATIVE ON-DEMAND PRESENTATION. NENA INVITES AND ENCOURAGES ALL NENA MEMBERS TO VISIT NENA.ORG/50WEBINAR TO VIEW THE PRESENTATION AND USE IT AS AN EDUCATION TOOL DURING 9-1-1'S GOLDEN ANNIVERSARY YEAR! CHECK IT OUT TO LEARN SOME 9-1-1 HISTORY, HEAR FUN FACTS YOU DIDN'T KNOW, AND GAIN A RENEWED APPRECIATION OF JUST WHAT 9-1-1 MEANS TO THE 240 MILLION AMERICANS WHO NEED EMERGENCY HELP EVERY YEAR.

February 16, 2018 marked the 50th/Golden Anniversary of the first 9-1-1 call. Over the past half century, 9-1-1 has become the most familiar number in the United States and the gateway through which most emergencies in America are reported. During this 50 year period, emergency calls placed through the 9-1-1 system in conjunction with public safety Call Takers and Dispatchers (Public Safety Telecommunicators/PSTs), working closely with their public safety Law Enforcement, Fire-Rescue and EMS partner agencies, have helped in saving millions of lives and trillions of dollars of property. The history of 9-1-1 is a fascinating and compelling story, made even more so when including the 33-year period leading up to the first 9-1-1 call made in Haleyville, Alabama on February 16, 1968.

Some important dates include:

- The concept of 9-1-1 was born as the result of a tragic fire in London, UK on November 10, 1935
- On June 30, 1937 London instituted the number 999 to report an emergency
- In 1957 the National Association of Fire Chiefs (now International Association) began to advocate for a 3 digit number be used in the US
- The Commission on Law Enforcement and Administration of Justice, through Executive Order in early 1968, recommended a 3 digit emergency reporting number

9-1-1 History Webinar Available

Longtime NENA member Steve Souder, former Director of Fairfax County, VA 9-1-1 has captured the rich *History of 9-1-1* in an interesting and highly informative *on-demand* presentation with imbedded audio. The webinar is suitable for use at chapter meetings, 9-1-1 centers, training academies, schools, civic associations,



Early 1968 (cont.)

- On February 16, 1968 (35 days later) the first 9-1-1 call was made in Haleyville, Alabama. This was "Basic 9-1-1".... Providing only ANI (Automatic Number Identification)



Late 1967



media events, etc. The presentation is easily downloaded using the link

nena.org/50webinar

NENA invites and encourages all NENA members to view and use the presentation during 9-1-1's 50th/Golden Anniversary year and beyond...to gain and share a renewed appreciation of why 9-1-1 has been America's "go to number" to report emergencies to public safety for the past 50 years and will continue to be in the next half century. ●

Steve Souder, NENA Maryland & NENA Virginia Chapter Member, stevesouder@atlanticbb.net

Introducing NENA's Advanced Police Dispatch Course



Ty Wooten, ENP
NENA Education Director

If you've taken a NENA class within the past two years, you've likely noticed a question on the evaluation form that asks, "What courses would you like to see NENA develop?" One of the most common answers we receive is, "More training for law enforcement dispatchers."

You asked, and we delivered! I'm proud to announce our new *Advanced Police Dispatch* course, an eight-hour class designed to take your skills in this ever-challenging area to the next level.

Law enforcement is a rapidly-changing profession, and officers' needs are constantly evolving. Law enforcement dispatchers need advanced skills to keep up with new technologies, increased demands from the field, a rise in active-assailant events, changes in handling mentally ill persons, and the advent of incident dispatch teams.

This course covers all these topics and more in an interactive, discussion-based setting.

The course offers a detailed overview of the LE dispatcher's role in the incident command structure, and explains how communications center personnel interact in the ICS world. It provides an in-depth explanation of radio system functionality, how to coordinate communications in a fast-paced environment, how the dispatcher's actions in assigning radio channels or talk

groups can have an effect on the overall success of the event, and how to handle multiple channels or talk groups at once.

As the country experiences an increase in rapidly-evolving events such as active assailants, hostage situations, and other critical incidents, dispatchers increasingly need the skills to handle these events. The *Advanced Police Dispatch* course provides a comprehensive overview of SWAT operations and negotiator situations. While this does not take the place of specific, certification-based negotiator training, it will help provide the skills necessary for success, should the dispatcher find themselves in such a situation. It also provides information on law enforcement priorities in such situations, and ways that dispatchers can assist and support field personnel in these critical events.

Advanced law enforcement dispatchers sometimes get deployed to the field as part of an incident dispatch team. The course examines the unique challenges to these situations, provides guidance on how to prepare for deployment, and how to function outside the traditional communications center environment. Knowledge of common field tactics is also covered, so the dispatcher can anticipate and provide for field responders' needs.

With the rise of text-to-911, video and picture messaging, camera feeds, and myriad new data capabilities provided by NG9-1-1 and FirstNet, dispatchers have more information than ever before at their fingertips. The course outlines ways that dispatchers can use these and other evolving technologies to benefit their field responders' safety and get up-to-the-minute information to those who need it.

This course was developed by Lisa Fulton, ENP; Jennifer Kirkland, ENP, CPE;

and Leslie Whitham, ENP, all of whom are NENA instructors with a combined sixty-seven years of experience in law enforcement dispatch. Each brings a different perspective to the subject, as they hail from very different regions in the US. This means the *Advanced Police Dispatch* course is universal to all law enforcement dispatchers, and is beneficial to all levels, as well. Even seasoned dispatchers will find value in this class, as it represents best practices and to-the-moment current information. And just like all of NENA's courses, this one has been reviewed by a number of other subject matter experts and legal authorities to ensure that the content is correct and adheres to industry standards and best practices.

NENA instructors strive to bring you exceptional training experiences. This is not a lecture-based course! By incorporating audio, videos, and lots of discussion, we ensure that your day is filled with opportunities to build on your foundational knowledge, interact with and learn from your classmates, and take home concrete ideas and skills you can immediately implement in your center.

We are excited to bring this new course, along with nearly thirty other existing courses, to our membership and the greater public safety community. We continue to support the evolution of our 9-1-1 centers by enhancing the skills and knowledge of those who work to ensure the safety of field responders and the public. Please stay tuned to NENA's website, our educational calendar, social media, and email blasts for more information on our upcoming course offerings.

If you are interested in hosting this or any other NENA course, if you have an idea for a class, or have any other content suggestions, please contact me at twooten@nena.org. ●

The Current and Future Benefits of NG9-1-1



Roger Hixson

NENA Technical Issues Director

Did you know that you don't need a 100% Next Generation 9-1-1 system in place to start benefiting from many of the features and functions available in an NG environment? States and jurisdictions with "transitional" NG9-1-1 are already reaping the benefits. And having true NG9-1-1 capability in place sooner rather than later, compliant with the NENA architectural standard and other related standards, provides more immediate positioning to take advantage of technological developments as they occur and as certain additions are made by major stakeholders. Let's inspect the benefits obtainable now, and those that will be enabled as originating service providers and 9-1-1 authorities add certain features.

Some benefits quoted by 9-1-1 authorities for statewide NG9-1-1 systems in place now:

- Reduction of network costs through use of IP networks
- Reduced call set up time
- Faster emergency response times
- Improved quality of service, such as more advanced routing control
- Efficient use of resources
- PSAPs are open/flexible to future technological advances
- Increased reliability and increased disaster recovery of the delivery network
- Clearer demarcations of responsibility and accountability
- Reduced potential points of failure in the network
- Transferability of 9-1-1 calls and location data statewide
- The ability of PSAPs to exchange incident data
- LATA boundaries, wire centers,

and rate centers do not restrict area of service

- Improved accessibility and increased compatibility that ensure open/equal access to the emergency response system, including those with disabilities
- Service parity for all 9-1-1 callers
- Database control of policy rules for overflow and alternate routing
- Interoperability
- Expandable to include other jurisdictions or entities, such as other states
- Increased operations logging of call delivery to improve processing policies
- Easier upgrades and maintenance due to core services features
- Readiness for real-time text

Let's focus on that last benefit for a second to talk about one of the major issues with our NG9-1-1 transition. A near-term benefit of NG is the ability to implement real-time text (RTT), which is a much more effective method of texting to 9-1-1 than the current TTY or Interim SMS solutions. RTT requires an IP network and system between users and the PSAP, and location-based routing of messaging. If PSAPs want to be able to receive pictures and video, same story.

Of course, carriers and other service providers have to support RTT and video for 9-1-1, and that requires that they implement their end of the process. And that highlights a relationship truth in the journey to NG9-1-1. In the major case of wireless calling, there are four major entities: the handset, the originating provider, the 9-1-1 system service provider, and the PSAP. Each of these entities uses standards that must work together seamlessly to accomplish end-to-end 9-1-1 service, and there are dependencies between them.

When the development, testing, and implementation timeframes of these standards don't match up, the ability to use the related features is impaired. There is little coordination, either with or without regulatory requirements, to see that all parts of the process are

PUBLIC SAFETY NEEDS TO COME TOGETHER AS A GROUP AND A FORCE TO BE AGGRESSIVE ABOUT BEING PREPARED IN THEIR PART OF THE PROCESS, AND TO PRESS FOR OTHERS TO MOVE FORWARD IN A COORDINATED MANNER. IT IS NOT ACCEPTABLE OR WORKABLE TO STAND STILL. ONLY THEN WILL MAJOR PROGRESS BE MADE TO REALIZE THE POTENTIALS OF NG9-1-1 IN THE RAPIDLY EVOLVING TELECOMMUNICATIONS TECHNOLOGY AND OPERATIONAL ENVIRONMENT THAT WE LIVE IN.

ready in a similar timeframe. As a result, disjointed actions take place over a longer period of time than is desirable or necessary to move the whole picture forward.

The 9-1-1 caller expects and assumes that all parties are providing 9-1-1 services to meet their needs for emergency calling. Financial, policy, and business priorities affect the evolution of 9-1-1 service. We have multiple other parties trying to more quickly "solve" the problem of providing emergency service communication, often in unknowledgeable or simplistic ways. Public safety needs to come together as a group and a force to be aggressive about being prepared in their part of the process, and to press for others to move forward in a coordinated manner. It is not acceptable or workable to stand still. Only then will major progress be made to realize the potentials of NG9-1-1 in the rapidly evolving telecommunications technology and operational environment that we live in. ●

PRODUCTS AND SERVICES GUIDE

Call Processing Solutions



WEST SAFETY SERVICES

1601 Dry Creek Drive, #250
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West Safety Services connects people to first responders, managing the entire emergency response continuum through data management, reliable networks and a deep understanding of public and personal safety emergency response protocols. West is unrivaled in its ability to provide high-quality, reliable access to 9-1-1 for traditional and emerging technology users.

Consulting

ADCOMM ENGINEERING COMPANY

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Fax: (425) 488-3952
Email: adcomm@adcomm911.com
Web: www.adcommeng.com
ADCOMM provides consulting engineering/professional project management services for simulcast systems, business process analysis, procurement processes, workload analysis, site development, dispatch center design/development, computer aided dispatch, mobile data, paging/alerting, microwave radio (voice/data), 9-1-1 telephone systems, alarm/control systems, P25 radio systems, etc. Staff includes registered professional engineers and project management professionals.

Cybersecurity



20/20 TECHNICAL ADVISORS, LLC

9640 Commerce Drive, Suite 414
Carmel, IN 46032
Ph: (317) 249-8100 Ext 1001
Email: jack.kessler@2020technical.com
Web: www.2020technical.com
20/20 Technical Advisors, LLC offers a comprehensive portfolio of cybersecurity services. We provide 24/7 cybersecurity monitoring, security assessments, penetration testing and cybersecurity awareness training. As public safety technologies advance, so do the cyber threats. Our experienced staff assists our clients by proactively monitoring and preparing for those threats.

Data Management



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Enhanced 9-1-1



COMTECH TELECOMMUNICATIONS CORP

2401 Elliott Avenue, Suite 200
Seattle, WA 98121-3311
Ph: (206) 792-2000
Email: SST-Sales@comtechtel.com
Web: www.comtechtel.com
Comtech's wireless E9-1-1 solution enables carriers to comply with mandated Phase I/II guidelines. Our solution integrates with the carrier's selected location vendor, ensuring that the appropriate PSAP receives a subscriber's emergency call. This is achieved through precise location and/or coarse location using Cell ID, Wi-Fi MAC Address or Femto ID.

ESInet/NGCS



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Web: www.comtechtel.com
Comtech's Next Generation Core Services (NGCS) operates on an ESInet as a Next Generation 9-1-1 (NG9-1-1) solution for connecting originating service providers with PSAPs. Based on the NENA i3 standards, our NGCS is modular, highly available, and has been implemented at state, region and county levels since 2006.

GIS Systems



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Next Generation 9-1-1



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Seattle, WA 98121-3311
Ph: (206) 792-2000
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Web: www.comtechtel.com
Comtech offers an end-to-end, standards-compliant approach to implementing NENA i3 systems, combining Next Generation Core Services with the necessary transitional elements to bring legacy carriers and PSAPs onto the ESInet. This replacement for legacy solutions reliably and accurately routes 9-1-1 voice calls, texts to 9-1-1 and multimedia messages to PSAPs.

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Web: www.geo-comm.com
GeoComm provides public safety GIS systems that route emergency calls to the appropriate call center, map the caller's location on call taker or dispatcher maps, and guide emergency responders. Our NG9-1-1 GIS solutions provide GIS data quality control, transformation, and aggregation services as well NG9-1-1 system emergency call routing.

RAPIDSOS

RAPIDSOS

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Ph: (347) 879-0024
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Web: www.rapidsos.com/psapintegration
RapidsOS provides a direct data pipeline from connected devices to Public Safety through the Next Generation 9-1-1 Clearinghouse. The NG911 Clearinghouse is a NENA i3 compliant Location Information Server and Additional Data Repository that is accessible to PSAPs through integrations into all major call-taking equipment, mapping software & CAD products.



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VOIP Solutions



COMTECH TELECOMMUNICATIONS CORP

2401 Elliott Avenue, Suite 200
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Ph: (206) 792-2000
Email: SST-Sales@comtechtel.com
Web: www.comtechtel.com
Comtech's proven VoIP Positioning Center is at the core of our IP-based emergency call-routing solutions. VSPs use our NENA i2 solution to deliver reliable E9-1-1 service to their fixed/nomadic subscribers. Our solution leverages indoor location technologies for improved accuracy related to VoWiFi E9-1-1 calls originating from indoors or rural areas.

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