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Accelerating Wireless E9-1-1 Phase I Deployment: Collaborating to Develop New Strategies

By Ron Whinery

The wireless communications industry is complex and dynamic, and one that has experienced tremendous growth. With more than 100 million wireless subscribers¹ in the United States today, the public safety community has been challenged to embrace the wireless industry. The charge for public safety and the wireless industry to collaboratively address and resolve issues of mutual interest has proven difficult.

Unfortunately, adversarial relationships have sometimes developed and proven divisive, hindering the establishment of the cooperation necessary for the successful coordination and deployment of wireless E9-1-1, identification of improvement opportunities, and the resolution of latent problems and issues.

NENA's Response to Wireless Challenges

The NENA Executive Board understood the importance for inclusion of members of the wireless industry, and decided to embrace them as partners due to the ever-increasing impact wireless phone use has had on PSAPs. The NENA Executive Board responded by establishing the NENA Wireless Committee, which was created to complement the NENA Technical Committees and begin addressing the issues surrounding wireless in a collaborative manner—as partners.

At the December 2000 Technical Committee Chair meeting at NENA Headquarters, the vision and mission (see graphic on page 8 of Summer NENA News) for the NENA Wireless Committee was drafted. To best benefit the NENA membership, the public safety community, and the wireless service providers, committee chairs agreed that the initial agenda for the Wireless Committee should be to significantly improve the processes necessary for the successful rollout of wireless E9-1-1. The challenge was stated as, “How can we *significantly* reduce the project cycle time² between when wireless E9-1-1 surcharges are added to customer bills and when wireless E9-1-1 is fully operational?” It became a search for volunteers with the necessary experience, knowledge and perspective to help identify and alleviate the barriers to implementation and develop more effective processes to improve the results of wireless E9-1-1 deployments going forward.

¹ CTIA's semiannual “Wireless Industry Survey,” which examined the wireless market from June 2000 to December 2000, estimated wireless subscribers totaled 110 million—up 13.5% from the mid-2000 figure of 97 million.

² Project Cycle Time is the elapsed time from the start to the completion of a project. It includes the overall time to complete all activities, however sequenced, including the wait or delay time between the completion of one activity and the start of the next, until the entire project is completed.

“IS” and “SHOULD” Processes³

The agenda for the NENA Wireless Committee began by identifying major components of the current “IS” process and depicting the process as a sequential series of activities (see Figure 1). The Wireless Committee members validated the characterization of the “IS” process as being fairly close to reality and easily visualized. Committee members agreed that the major components of the “IS” process were an appropriate beginning focus for discussing and identifying opportunities for process improvements and developing more effective sequencing and coordination of the interdependent activities.

The NENA Wireless Committee established several study groups to address major components of the wireless E9-1-1 deployment process, and each group was responsible for developing their own study group charter and mental model. The charter defined the scope and boundaries of the major process components the group will address, established the desired results, and defined the anticipated involvement of study group volunteers to accomplish the desired result.

The mental model identified various study group members’ assumptions, perceptions, generalizations, and biases based on their diversified perspectives and experiences. The development of a shared mental model helped facilitate study group dialogue around the major assumptions, accelerated learning, and allowed quicker alignment of group members. This helped new members and reviewers come up-to-speed on the background and perspective shared by the study group as they addressed major process improvements. A brief description of each study group under the Wireless Committee follows.

Legislation & Administrative Procedures

The stage is set and the curtain goes up when wireless E9-1-1 legislation is passed, the administrative mechanism is put in place, and the processes and procedures are developed. Some combinations of these attributes facilitate a partnership of cooperation and encourage collaborative planning and deployment of wireless E9-1-1, whereas others interfere with and discourage the effective planning and deployment of wireless E9-1-1. The Legislative Study Group, led by John Benson (Iowa E911 Program Manager), is identifying, investigating and analyzing the legislation, administrative mechanisms, and processes and procedures that most effectively facilitate the deployment of wireless E9-1-1. The Legislative Study Group will make recommendations that help others better understand what combinations have resulted in the highest probability of success elsewhere.

The Legislative Study Group is also addressing emerging issues and potential cost recovery paradigm shifts.

³ A method of mapping processes that makes them visible and creates a common figure that a group can focus on and improve, as in process redesign. Geary A. Rummler and Alan P. Brache, *Improving Performance* (San Francisco: Jossey-Bass, 1990).

Planning & Implementation

For the most part, wireless E9-1-1 planning has been reactive. The Planning and Implementation Study Group, led by Steve Seitz of ComCARE, is identifying preliminary planning processes that provide more effective alignment of the various stakeholders earlier in the planning process than what currently occurs. For that matter, some stakeholders have never had the necessity to interface or work together. By initiating the process earlier and using a more disciplined process, it is expected that stakeholders will better understand each other's needs and terminology and will make the planning phase more productive. The stakeholders include: wireless service providers, 9-1-1 service system providers, state 9-1-1 entities, individual PSAPs, ALI database providers, wireless Service Control Point (SCP) system providers, and the entities responsible for addressing.

Phase I & II Contracts

The Phase I and II Contracts Study Group, led by Lavergne Schwender (Assistant County Attorney, Harris County, TX), was originally sponsored by the 9-1-1 Center Operations Committee Wireless Track. The NENA Wireless Committee offered to co-sponsor the group to add wireless service providers' perspectives and create partnering.

Contracting has been a major impediment to the timely deployment of wireless E9-1-1. Agreements must be established and contracts negotiated before deployment activities normally start. The contracting phase could start and complete much earlier than what currently occurs. To help jump-start the process, developing a generic contract agreed upon by the various entities should allow quicker reviews, approvals, and agreements. In addition, non-disclosure agreements (NDAs) must be established, and in effect before wireless service providers will share confidential information necessary to define the project scope. The preliminary planning process and alignment of stakeholders does not occur until NDAs are established with the wireless service providers. It is not unusual for the NDA process to take three to six months and normally does not start until information is being requested, which immediately translates into a delay.

Phase I Status Reporting

Does anyone know yet how to consistently measure and report the status of wireless E9-1-1 Phase I deployments? Unfortunately, no consistent method of measuring and reporting status and having the capability to roll-up those results to report nationally exists. The Phase I Status Reporting Study Group, led by Jim Nixon of VoiceStream Wireless, is identifying the best methods currently being used to measure and report wireless E9-1-1 status. Then, they will recommend how to get it adopted and used everywhere.

PSAP Readiness

There is still confusion concerning what is required for a PSAP to request and be ready to receive wireless E9-1-1 Phase I and II service. The PSAP Readiness Study Group, led by Russ Russell of TSI Telecommunication Services Inc., is identifying the criteria for both Phase I and Phase II readiness. The study group will develop and recommend guidelines that will be reviewed, approved, and made available on the NENA web site.

Additional Study Groups

Several additional study groups have been chartered to address chronic problems and issues that continue to impact PSAPs or to improve poorly defined processes that require timely and responsive cooperation between PSAPs and wireless service providers. These problems and issues have continued to surface at NENA Critical Issues Forums, the NENA Technical Development Conference, and elsewhere. They are well known and widely recognized, but no previous efforts have successfully addressed and permanently resolved the problems or issues. These additional study groups are as follows.

NENA CoID & 24x7 Contact

Not all wireless service providers are aware of the necessity to maintain a NENA Company Identifier (CoID) and register a 24x7 contact number. The NENA CoID and 24x7 Contact Study Group, led by Elizabeth McGlynn of NENA, is developing a plan to communicate with all wireless service providers to encourage their voluntary participation in this program, which is sponsored and maintained by NENA.

For more information on NENA Company Identifier Codes, please see the article “What’s Your ID? NENA Company Identifiers are an Asset to PSAPs” in the Summer 2000 issue of *NENA News* magazine or on the *NENA News* Online Archives at www.nena9-1-1.org.

Security & Follow-up

Exigent situations are not handled consistently from one wireless carrier to the next, nor are PSAPs consistently educated regarding the security requirements and policies necessary for the wireless service providers to maintain integrity of customer privacy. This creates a frustrating problem for PSAPs and exacerbates life-threatening situations when inconsistent procedures and policies in critical situations inhibit cooperation when minutes count. The Security and Follow-up Study Group, led by Astin Buchanan, (Information Systems Manager, Tarrant County 9-1-1 District), is reviewing existing procedures and policies. Jointly, the PSAPs and wireless service providers are developing a recommended set of procedures acceptable to both. Wireless service providers are identifying and providing their security contact information.

Wireless Call Scenarios

Various wireless call scenarios exist where 9-1-1 can be dialed from a wireless phone and several additional scenarios exist after the call is completed, but before the PSAP obtains final closure. The Wireless Call Scenarios Study Group, led by Roger Hixson (NENA Technical Issues Director), is identifying and documenting each of the call scenarios and plans to address the issues associated with each.

Conclusion

The NENA Wireless Committee is dedicated to developing improvements to the processes that ultimately deliver the desired results expected from wireless E9-1-1. The process improvements should prove less frustrating to public safety and wireless service

providers because they will result in more productive efforts, less false starts, and smoother project implementation.

The real winners of the NENA Wireless Committee's efforts will be the citizens of the states and jurisdictions that successfully deploy wireless E9-1-1 and the wireless customers whose service providers collaboratively work with public safety to provide the added value of safety for their customers.

Clearly, developing and maintaining a partnering relationship between public safety and wireless service providers has proven the most effective method of realizing success in the deployment of wireless E9-1-1, and NENA will continue to support all the stakeholders that are working cooperatively to make this happen.

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