NENA Wireless 9-1-1 Certification Program

BACKGROUND:

By 2005 some 100 million wireless 9-1-1 calls will be placed to the Nation's public safety answering points (PSAPs). The need to capture accurate location information, consistent with that provided by current Enhanced 9-1-1 systems, is well documented.

The wireless telephone industry has responded by offering a number of technologies and systems that address these requirements. These technologies can be integrated in different combinations, but all with the objective of providing an end-to-end solution.

The Federal Communications Commission (FCC), in response to increasing demands for improvement in the delivery of emergency services to wireless telephone subscribers, has mandated that wireless communications services implement the technology necessary to accurately locate wireless 9-1-1 callers. The FCC promulgated standards set forth in FCC Docket 94-102 and further specified the time frame within which location technology must be made available.

THE PROBLEM:

Multiple location technologies have been developed or adapted to provide location information. Even though FCC standards call for well-defined field tests and suggests the manner in which these test will be performed, there is no recognized methodology in which to prove that the system is performing according to the standards. An improved level of public safety cannot, however, be achieved in the absence of objective, empirical proof that the various location technologies deployed by the wireless carriers are in fact performing according to the standards.

KEY FEATURES AND BENEFITS OF THE PROGRAM:

The National Emergency Number Association's (NENA) Wireless 9-1-1 Location Certification program is predicated on the need to provide objective proof of performance testing of these location systems in a real-world environment. The program, based on the FCC Docket 94-102 standards for Phase II compliance, is intended to ascertain:

1. Location of the wireless call within the required parameters
2. Correct routing of the wireless call to the designated PSAP
3. Accurate transmission of relevant location and other calling data to the PSAP

NENA is the most recognized and respected professional organization dedicated solely to raising the art and practice of 9-1-1 delivery. An organization comprised of public safety professionals and commercial representatives from the 9-1-1 industry, NENA is the only organization that can bring the objective evaluation needed to assure the success of providing accurate location.

Through NENA the certification program will provide valuable empirical data, which will help spur development of new technologies that will help overcome technological implementation complexities. Only NENA's involvement will balance the interests of the public safety community, consumers, wireless carriers, and the equipment manufacturers.

RCC Consultants, Inc. (RCC) will serve as the technical support arm of NENA for the certification process. RCC will provide technical services related to setting up fundamental program processes and discrete tests, conducting field trials, analyzing measurements and reporting its findings to NENA.

Additional integral participants, such as the wireless service providers, 9-1-1 authorities and PSAPs, and Local Exchange Carriers will foster technology development that achieves competitive neutrality. The results will benefit the millions of citizens who access 9-1-1 each year through a wireless device.

RCC

HOW THE PROGRAM WORKS:

The wireless service provider will make initial contact with NENA. A start-up kit will be forwarded to the wireless service provider by NENA. The start-up kit will describe the program and include a checklist of information necessary to design the test plan.

Upon notification from NENA that a test has been requested, RCC will support NENA on demand for particular technical answers required by the WSP in order to proceed with the engagement. In some instances it may be necessary to execute non-disclosure agreements between relevant parties to safeguard proprietary information.

RCC will prepare a test plan customized to meet the specific location technology being used and the size of the service area to be tested. A cost for the test, based on the size and complexity of the test, will be calculated. This information will be forwarded to NENA for inclusion in the test contract.

Upon execution of the contract, RCC will be notified to proceed. RCC's test team will begin gathering and preparing data needed for the test such as the location of all of the WSP's tower sites and definition of the service area to be tested. RCC will coordinate with the WSP, PSAP and Local Exchange Carrier in preparation for the test.

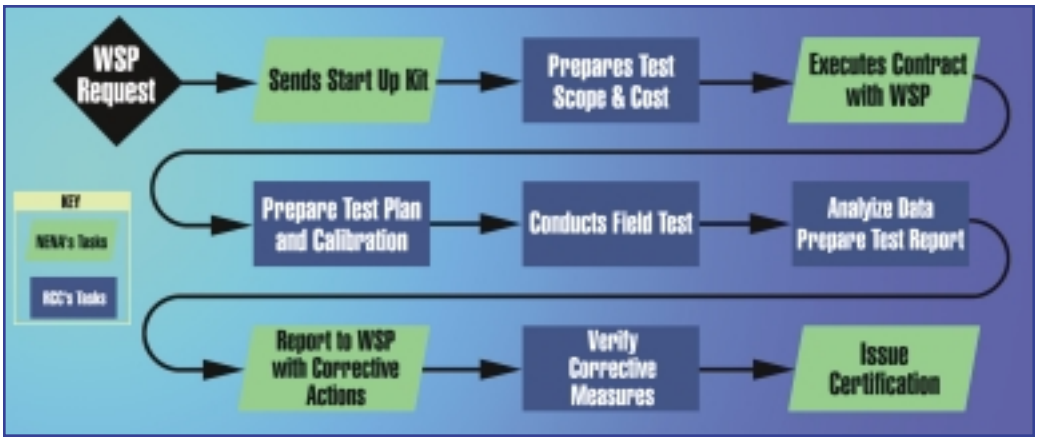

FIGURE 1

A number of known sites will be identified and will be used to calibrate test equipment. These will be known sites where the exact latitude and longitude are known. RCC's test teams will perform calibration testing prior to conducting field tests.

RCC's test team will conduct field tests according to the test plan. Test data will be analyzed and the results reported to NENA.

NENA, after reviewing the test report, will render a certification decision. In the event there were deficiencies found in the test, NENA will provide a report detailing the reasons for denial of certification and submit curative recommendations. The program process is summarized in Figure 1.

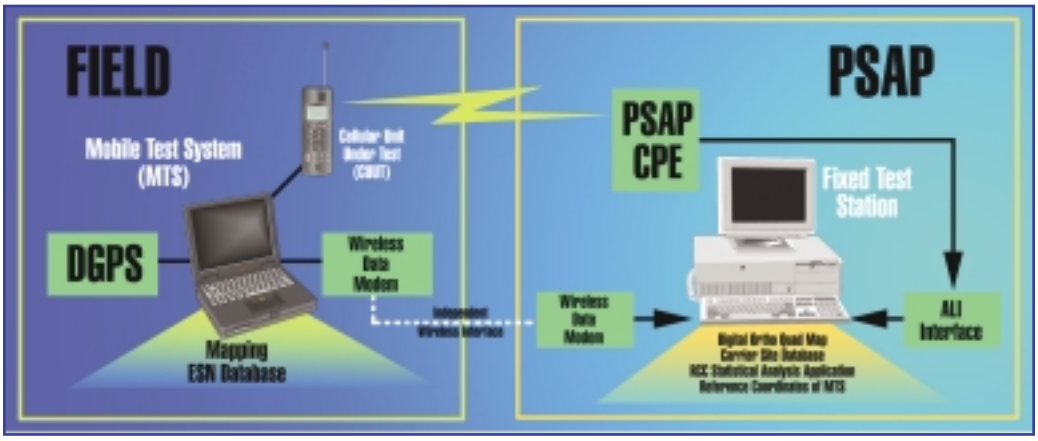

FIGURE 2

TESTING PROCEDURE

Testing procedures are based on requirements outlined in the Federal Communications Commission's OET71 Bulletin. Random test locations within the PSAP service area boundaries will be tested using mobile and fixed test systems as described in Figure 2.

Location information for each test call will be captured and compared to the location determined by a reference differential GPS receiver.

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