

## 2009 Innovations Awards Program APPLICATION

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ID # (assigned by CSG): 09-S-02AR

**Please provide the following information, adding space as necessary:**

State: Arkansas

Assign Program Category (applicant): Public Safety/Corrections  
(Use list at end of application)

1. Program Name – *Arkansas Wireless Information Network*
2. Administering Agency – *Department of Information Systems*
3. Contact Person (Name and Title) – *Penny Rubow, AWIN Program Director*
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9. Please provide a two-sentence description of the program

*Arkansas Wireless Information Network (AWIN) is a multi-phased program that leveraged new and existing wireless resources to create a statewide, interoperable, wireless communication system for first responders and Arkansas public safety/service entities. The AWIN system is a multiple site, trunked communication system based on a digital 700/800 MHz system using the Association of Public Safety Communication Officials (APCO) Project 25 (P-25) standard, which is the industry standard.*

10. How long has this program been operational (month and year)? Note: the program must be between 9 months and 5 years old on March 2, 2009 to be considered.

*AWIN became fully operational in March of 2006.*

11. Why was the program created? What problem[s] or issue[s] was it designed to address?

*Historically, Arkansas agencies built and operated independent radio networks, leading to incompatible equipment and delays in emergency response. In most cases, Arkansas' radio users could not directly communicate across jurisdictional or organizational boundaries to coordinate emergency response. Disparate radio systems created difficult situations where coordination was imperative, leading to the use of multiple radios in a single vehicle to provide communications. Under these conditions, not only were the radio systems separate, but first responders, including personnel from fire, law enforcement, emergency management, and public health and safety, functioned in communication silos. Interaction with first responders from other jurisdictions or*

*disciplines was limited at best. Planning and coordination prior to an event seldom included personnel outside of individual organizations.*

12. Describe the specific activities and operations of the program in chronological order.

- a. *January – June 2004 - Project Initiation – During this period the project scope was identified, the system upgrade design was developed, the funding was secured, and the project team was identified.*
- b. *June 2004 – January 2005 – Project Planning – During this phase the project scope was detailed by fully developing the tasks and activities related to the project. The system design was finalized. Resources were assigned, equipment was ordered and received. Also during this time the stakeholder groups were formed. The stakeholder groups were the AWIN Steering Committee, the AWIN Local Leadership Council, and the AWIN Technical Advisory Group. These groups were responsible for ensuring that the project was delivered successfully – on time and within budget. The major accomplishment of these groups was the development of the Command and Control plan (see discussion below).*
- c. *February 2005 – March 2006 – Project Implementation and Control. During this phase old radio equipment was upgraded and new equipment was installed (where needed). Acceptance testing was conducted as each region was cutover to the AWIN system. If a test failed it was documented and testing proceeded. Final approval (sign-offs) were not completed until all tests were successfully completed. During this time radios were programmed and statewide just-in-time training was conducted. A significant accomplishment during this phase was the establishment of a robust communications effort. The AWIN website was developed at this time, as well as three e-mail notifications were established. AWIN Alerts were used on an as-needed basis to let users know when work was taking place in their area that may affect their communications; AWIN Weekly let users know what work had been accomplished, and what was planned for the next week. The AWIN Monthly Newsletter was developed to provide more in-depth information to the larger community of users and stakeholders.*
- d. *March 2006 – May 2006 – Project Closeout – Punchlists were prepared for each site and tasks on the punchlists were assigned and corrections made. A transition to operational status plan was developed and executed. The AWIN Operations and Management office was established. Final contract close – out was performed and final project acceptance documentation was executed.*

13. Why is the program a new and creative approach or method?

*An obstacle faced in the development of AWIN was overcoming the distrust of a state managed system, and getting emergency responders to collaborate on a more open approach to managing emergency communications. The AWIN Steering Committee, Local Leadership Council, and first responder working groups developed standards, policies, procedures, talk-groups, and templates to provide a firm foundation for interoperability and the Command and Control philosophy.*

*Command and Control is based on the National Incident Management System (NIMS). The Command and Control plan was established to ensure that the upper level administrators whose function it is to direct the resources of their department in the event of an emergency situation could communicate with each other and coordinate the response via the AWIN system. Under this plan operational communications are carried on via the responding organizations local radio system.*

*By allowing emergency responder organizations to retain their local radio systems for operational use the State was able to protect the investments in equipment and training at the local*

level, and ensure that resources on the AWIN system could meet adequately meet the need for a statewide communications system.

14. What were the program's start-up costs? (Provide details about specific purchases for this program, staffing needs and other financial expenditures, as well as existing materials, technology and staff already in place.)

*Prior to the implementation of AWIN, the state owned an antiquated Automatic Multiple Site Selection (AMSS) system that by mid 2003 was failing. To solve the problems described the state's leadership developed plans to achieve the objective of establishing a single system for emergency responders in Arkansas. The State purchased an infrastructure solution that is a standards based 700/800 MHz Motorola ASTRO25 IP network consisting of two (2) Master Sites, 72 RF Sites, 22 console locations, and three (3) High Performance Data (HPD) locations, providing statewide interoperable communication and integrated voice and data capabilities to 15,000 users throughout the state.*

*To address funding issues, project leadership sought to maximize all available resources. Analysis identified a significant investment by the state in the AMSS infrastructure, and the quantity and location of tower sites, associated radio equipment, and interconnecting networks had both monetary and strategic value. This investment was leveraged to create the AWIN backbone. This allowed the state to maximize performance to all agencies and minimize costs to the state for wireless communication capabilities. The investment in AMSS was approximately \$21,000,000 in 1985. With additional bond and grant dollars, and a small portion of General Revenue, totaling \$73,407,950, the total project investment was approximately \$94,407,950.*

*The Department of Information Systems (DIS) was selected to manage the implementation of the project. Management for the project followed DIS Project Management Methodology, which is based on the Project Management Institute (PMI) Body of Knowledge. Arkansas State Police (ASP), Arkansas Department of Emergency Management, and DIS provided the personnel and administrative support to ensure the successful completion of the project. During the implementation, the project staff consisted of eight (8) FTE's on the state project team, 22 FTE's on the vendor implementation team, and five (5) FTE's on the third-party quality assurance team.*

*In early 2005 DIS was chosen to provide on-going program management for the system. The AWIN Management and Operations office was developed over the course of the next 18 months. The AWIN M & O office was established with a Program Director (Existing DIS Staff), System Manager (New Hire), and a Network Technician (Existing ASP Staff). The office has grown since that time and has added a System Engineer (Existing DIS Staff), three additional Network Technicians (New Hires), a Project Manager (Existing DIS Staff), and a Project Coordinator (Existing DIS Staff).*

15. What are the program's annual operational costs?

*Annual operating costs have averaged \$6.1 million a year.*

16. How is the program funded?

*AWIN is funded entirely by state funds.*

17. Did this program require the passage of legislation, executive order or regulations? If YES, please indicate the citation number.

*The original analysis was performed under the direction of the Statewide Radio System Work Group which was created by legislation (82nd General Assembly, Regular Session, Act 502 of 1999).*

*This legislation did not provide oversight for the implementation or funding of a system. The Act contained a sunset provision that ended the working group on June 30, 2001.*

18. What equipment, technology and software are used to operate and administer this program?

*Motorola ASTRO25 operating system software provides for the call management. Netboss and Moscad are used to provide monitoring of the network and microwave transport system. Genesis is used to perform call analysis.*

19. To the best of your knowledge, did this program originate in your state? If YES, please indicate the innovator's name, present address, telephone number and e-mail address.

*Yes, to the best of our knowledge no other state has implemented the Command and Control concept. The unique approach has allowed Arkansas to establish interoperability for emergency responders statewide, while allowing cities and counties to maintain their local radio systems for daily operations. The innovation was developed by the AWIN Steering Committee and the AWIN Local Leadership Council. Points of Contact for these groups: Judge Sonny Cox, [arcojudge@centurytel.net](mailto:arcojudge@centurytel.net), 870.946.4321, John Luther, 479.444.1722, [jluther@co.washington.ar.us](mailto:jluther@co.washington.ar.us), David Maxwell, 501.683.6700, [David.Maxwell@adem.arkansas.gov](mailto:David.Maxwell@adem.arkansas.gov), or Penny Rubow, 501.682.5358, [penny.rubow@arkansas.gov](mailto:penny.rubow@arkansas.gov)*

20. Are you aware of similar programs in other states? If YES, which ones and how does this program differ?

*None that we are aware of.*

21. Has the program been fully implemented? If NO, what actions remain to be taken?

*Yes, implementation is complete.*

22. Briefly evaluate (pro and con) the program's effectiveness in addressing the defined problem[s] or issue[s]. Provide tangible examples.

#### *Enhanced Coordination - Pros*

*The benefits for this program are many. Where there were once barriers to communication, AWIN has helped to eliminate communication boundaries. Emergency Managers can coordinate emergency response hundreds of miles away, allowing for more efficient and timely response. First responders can be directed while en route to an event, providing for more effective personnel deployment. Enforcement of access to disaster areas provided by the State Police and National Guard is better coordinated.*

*The needs of the citizens and first responders in the state were paramount in the decision to implement AWIN. It is impossible to place value on a human life, or to determine the value of ending the suffering of people impacted by a disaster. The improvements to emergency response and the lives saved far outweigh the costs associated with the project.*

*The benefit of collaboration between multiple agencies for a coordinated emergency response is one of the primary advantages to AWIN. AWIN provides first responders with a critical tool for communication, which has aided in search and rescue efforts.*

*This benefit of collaboration was most recently illustrated in early 2009 when the state was faced with one of the worst ice storms in the history of the State. Thirty 32 of the State's 75 counties were*

*impacted by this event. The affected counties lost electricity which lead to failures of land-line phone systems as well as cellular phones. Many of the counties had no means of communications other than the AWIN system. AWIN was used to coordinate much needed emergency services in the days and weeks after the storm. The effective utilization of AWIN and the state's mutual aid plan ensured that Arkansans received the assistance they needed.*

### *Enhanced Coordination - Cons*

*The primary challenge for AWIN is funding. Maintenance and operating costs grow exponentially as the system's use and functionality grows. Also, the personnel to maintain and manage the system must have a higher level of training. Retaining a highly trained network engineer or technician can be a challenge. Related to this issue is that further, funding to grow the system is not available. Many emergency responders have expressed interest in using AWIN for their primary system; however, the cost to provide the additional infrastructure and the radios for these users is high.*

*Another challenge is on-going training for the users. AWIN Operations and Maintenance has instituted a robust user training program that offers both a basic level and certification level of training. Command and Control users typically use AWIN for only multi-jurisdictional or multi-disciplinary emergencies; keeping those users current on how to use the system requires constant training and support from the AWIN Operations and Maintenance team.*

23. How has the program grown and/or changed since its inception?

*The number of participants in the program has grown significantly. Upon implementation there were approximately 8000 users on the system. Better than half of those users were the tenant organizations of Arkansas State Police and Arkansas Department of Emergency Management. The system today has 15,368 users. This growth is largely in local public safety organizations use of the system.*

24. What limitations or obstacles might other states expect to encounter if they attempt to adopt this program?

*The AWIN program has benefited from having strong Executive and Legislative support, as well as support of the Elected Officials at the local level. This was most evident in the development of the Command and Control plan and the implementation of the plan. The chief obstacle for other states to overcome is the distrust that may be felt by local organizations when they are approached to participate in a 'state' program.*