



Enhanced 9-1-1 Solution Implemented for Maryland County and Regional Consortium

The Challenges

This Maryland county has a population of an estimated 800,000 residents which range from urban-industrial to suburban and rural areas. With such a large and diverse population, the County recognized a need to upgrade its existing 9-1-1 infrastructure. Specifically, they wanted to:

- Improve response times
- Integrate disparate communications technologies and systems
- Eliminate redundant data entry
- Reduce overall operating costs
- Produce call-takers with the exact caller location using landline and wireless communications

The county's legacy solution required each call-taker position to have multiple communications devices including 2-way radios, landline telephones, Teletypewriter (TTY) for the hearing impaired and four separate monitors and keyboards for communication and data entry for each emergency responder service.

The county's 25 call-taker needed a viable, scalable solution that could combine all the disparate public safety communication systems into a single, integrated communications solution.

The Solution

After evaluating a host of potential vendors, the Maryland county chose MicroAutomation as its solution integrator, working in conjunction with Siemens, to implement a comprehensive Enhanced 9-1-1 Public Safety Answering Point (PSAP) solution.

This complete network solution required a centralized database for call-takers to receive and enter information for public safety personnel to access. In addition, a centralized voice communications capability was added which unified voice communications between call-takers and all emergency responder personnel (police, fire, ambulance, environmental) for each call-taker position. The county realized many benefits from the MicroAutomation solution, including:

- Integration of automated location information for landline and wireless calls from people reporting emergencies
- Mapping software to pinpoint call location and directions
- Computer-Aided Dispatch (CAD) to record information from each call
- A Teletypewriter (TTY), allowing hearing impaired callers reporting an emergency to use phone lines and a keyboard for communication
- Communications with emergency personnel on-route to the site

The Benefits

The new Enhanced 9-1-1 Public Safety Answering Point solution built and integrated by MicroAutomation:

- Uses open standards technology, saving the county significant money in initial implementation and throughout the maintenance and enhancement lifecycle, over proprietary systems, which are less flexible.
- Implemented in less time than the scheduled timetable.
- Measurably improved response times, saving lives.
- Integrated the disparate technologies into a more user-friendly single solution including computer aided dispatch.
- Automatically generates location addresses and maps for public safety personnel from both land line and wireless callers.

// We have worked with MicroAutomation for more than six years. In that time they have fulfilled every requirement, hit every deadline, and their implemented solution has had no downtime, ever. MicroAutomation is completely professional. Their integrated solutions not only out-perform the competition in our estimation, but their costs are significantly lower for building the initial solution and for enhancing it over-time."

-A Maryland County 9-1-1 Manager



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Technical Implementation

Siemens installed a new telephone communication server that integrated telephone, two-way radio and intercom communications into one conversation requiring only a single communications device.

For land line calls, MicroAutomation integrated the contact center to the Automatic Location Information database. For wireless callers, they integrated all necessary technologies including GPS and cell tower triangulation devices that record the position of each emergency call. The new solution even allows for tracking of mobile emergency callers in moving vehicles.

Multiple screens and computer systems were replaced by a single workstation and screen for each agent, delivering X-Windows of information to the screen depending on the call-takers' immediate need. X-Windows is the UNIX equivalent of Microsoft Windows and is also used with the popular Open Source Environment LINUX. A digital Computer Aided Dispatch (CAD) solution was integrated to provide faster call answering and data entry.

Comprehensive call management reporting software is built into the solution. Custom reports were created to meet the unique needs of

the Enhanced 9-1-1 center and emergency response teams. Every call is digitally recorded and tracked in detail, including which party disconnected the call. All numbers of incoming calls are recorded and the new solutions allows for a one-button call back to the originator, if the call is disconnected.

Each call recording is catalogued digitally for post-event review and call-taker activity reporting. All solution components are time synchronized through a universal atomic clock tied to each device's time/date stamp system.

Additional Results

The Maryland county will work with MicroAutomation to implement Voice over Internet Protocol to expand their Enhanced 9-1-1 solution. The system will be mapped and located as precisely as traditional landlines using new converged communication technology. MicroAutomation is also working to bring the Automatic Location Information Database in-house with daily updates to eliminate transaction fees.

About MicroAutomation

Commercial, government and 911 customers worldwide have benefited from MicroAutomation's expert design, development, deployment and support of their contact centers for over 20 years. Outstanding creativity, the ingenuity and forethought of our engineers and partnerships with a wide-range of leaders in our industry allow us to continually provide our clients solutions that surpass expectations. www.microautomation.com

Contact Us

MicroAutomation Sales and Marketing
5870 Trinity Parkway, Suite 600
Centreville, VA 20120

Telephone: 1-800-817-2771 | Fax: 703-543-2099
sales@microautomation.com | www.microautomation.com