

The New Era of Public Safety Communications

New technologies and rising public expectations are impacting today's 911 Public Service Answering Points (PSAPs) in ways that require optimized communications architectures.



RELIABLE, SECURE AVAYA INTELLIGENT COMMUNICATIONS 911 SYSTEMS:

- Support multiple E911 services on one infrastructure.
- Manage multiple PSAPs from a single location.
- Provide the continuity and security that 911 systems require.
- Handle any kind of communication — voice calls, photos, IMs, Chats, and more.
- Track and manage multimedia communications through established workflow techniques.

Cell phone-driven call surges... new modes of citizen communications... citizen service calls occupying valuable skilled agents... the need to become E911- compliant — these and other factors are bringing about the most extensive rethinking of the 911 system since its inception nearly 50 years ago.

Why do many of the most important organizations governmental agencies in the world rely on Avaya?

The reason: Avaya is the global leader in contact center solutions who provides advanced 911 solutions based on proven, industry-leading technologies to help speed operational performance, enhance response capabilities and save lives.

Consider the following scenarios:

- **A hit and run vehicle accident is witnessed by a bystander who uses his cell phone to snap an identifying picture of the car before it leaves the scene.** 911 agents relay the photo immediately to local police who circulate it to patrol officers and the hit and run driver is apprehended in minutes.
- **A student in a college dormitory becomes concerned that a certain person down the hall is suddenly acting dangerously out of control.** She discreetly uses an Instant Message (IM) connection with a 911 operator who alerts campus security and with her permission is connected to the campus counseling service via the IM.

- **A serious storm requires evacuation of a PSAP (Public Service Answering Point) in a low-lying area that may become flooded.**

By previous arrangement, 911 agents are able to redeploy to a hotel ballroom located on higher ground and quickly re-establish operations.

Intelligent Communications and 911

These scenario types were not possible even a decade ago, but are now well within the grasp of 911 systems that embrace Avaya Intelligent Communications.

Avaya's Intelligent Communications capabilities for 911 systems dramatically expand what's possible today by breaking down communications barriers and enabling more robust, flexible infrastructure. With these solutions, 911 systems can take advantage of modern protocols such as Session Initiation Protocol (SIP) — for the quick routing of many kinds of communication — as well as advanced and reliable contact center technologies that can be used to handle peaks of hundreds of thousands of callers per hour.

As a global leader in contact center systems and 911 solutions, Avaya is uniquely positioned to enable government agencies to incorporate well proven technologies into their 911 systems. Avaya 911 solutions with advanced capabilities for key governmental organizations are deployed today in many regions of the world including Galveston, TX, and Washington, D.C. (see case studies in the next column) and scores of additional communities and government agencies.

AVAYA SOLUTIONS FOR 911

Galveston — Located in hurricane country, the Galveston County Emergency Communication District (GCECD) takes its job seriously. But over time, management of the eight PSAPs in the district became unwieldy and expensive. To simplify administration, achieve higher levels of reliability, while establishing an open standards platform to cost-effectively enable new services as needed, Galveston made the move to an Avaya IP infrastructure solution. If a PSAP has to be abandoned, dispatchers can now move to another location and log into their stations as if they were at their original position. Networking all eight PSAPs together means call overflow can be directed from a single, centralized administrative position. Upgrades are also now handled centrally from a single location and a centralized repository that tracks the total call volume.

Washington D.C. — Emergency responders in Washington, D.C typically answer calls within five seconds, with most calls answered in less than one second (compared to a national average of about 10 seconds), thanks to a 911 system implemented by Avaya and IBM. This system integrates emergency call centers for police, fire, rescue and emergency responders and also can handle a non-emergency “Action Line” and 311 informational calls. The solution automatically identifies callers and their location and can track incoming call trends and patterns.

IP Telephony boosts 911 performance

Avaya IP Telephony solutions enable 911 systems to shave response times and help save lives by:

- **Tracking all communications** — calls, pictures, emails and IMs — and linking them to a specific event, making it possible to better inform decision makers and communicate publicly with actionable information.
- **Allowing 911 agents to seamlessly integrate the phone, IM, e-mail and live chat** into an efficient workflow tailored to the needs of callers or other responders.
- **Transferring calls along with a call record** (even between geographically distant centers), making it unnecessary for routine information to be repeated.

- **Identifying patterns of incoming calls** to make decisions about staffing and resource allocation.

Simplifying coverage and management across multiple infrastructures

An intelligent, IP-based infrastructure brings an end to the old era when every 911 service area required separate systems, were separately managed and were unable to easily communicate with one another. Today with Avaya solutions, one infrastructure can handle multiple citizen services, as well as routine agency administrative communications, thereby lowering the cost of managing multiple PSAPs and multiple 911 services. This simplified coverage also preserves each area's individual autonomy and community identity.

Activities across multiple PSAPs can be collapsed into a single database application, enabling management of multiple sites from a single point while providing consolidated views a wide variety of real-time, historical and integrated reports of PSAP performance.

- **911 agents can now work from dispersed locations**, simplifying the process of drafting more personnel from other government agencies when situations require it.
- **PSAPs in neighboring jurisdictions can work together**, sharing calls and information.
- **Intelligent call routing capabilities and patented applications like Expert Agent selection** make sure that the right call gets to the call taker best suited to that situation.

Real-time performance reporting

Operating 911 services requires detailed reporting. A key reason Avaya is a global leader in contact center technology is the set of tools it provides for managing staff levels, balancing workloads, and staying in touch with individual call takers (e.g., to manage agent stress levels). These tools are all available in real time making it possible to provide decision makers and political leaders with accurate, up-to-the-minute status reports.

Enhancing performance through open standards

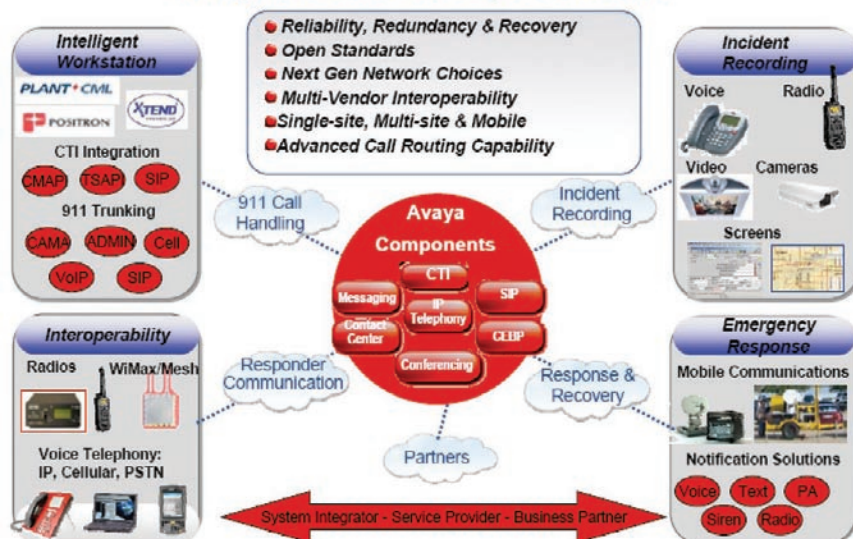
Avaya enhances the flexibility of PSAP operations through its embrace of open standards and multi-vendor interoperability allowing you to choose the tools (e.g., Intelligent Work Station and Computer Aided Dispatch) that make the most sense for your operations.

Avaya's advanced SIP (Session Initiation Protocol) solutions allow easy integration with the newest generation of Automatic Location Information (ALI) controllers and delivers features like presence which enables users to inform others of their status, availability, and how they can be contacted — before a communication session even begins. Call takers can take advantage of SIP to determine the status of critical emergency personnel and then can easily conference them into a call whether they are using a traditional land-line phone, a cell phone, a VoIP device, a Land-based Mobile Radio or other modes of communication.

Continuity

Avaya delivers a comprehensive, multi-layered solution approach to PSAP continuity that's designed to reduce problems while providing cost-effective alternatives to expensive and redundant back-up facilities.

Avaya Public Safety Solutions



Advanced capabilities:

- Since Avaya media servers duplicate all data and provide active call-state awareness and memory mirroring so that in the event of a processor failure, virtually every call capability is preserved.
- Tools like Avaya Converged Network Analyzer optimize call routing so that when a problem is detected, the call is re-routed transparently in milliseconds.
- Avaya Enterprise Survivable Servers (ESS) and Local Survivable Processors (LSP) minimize the effect of network outages on critical communications.
- Avaya EXPERT SystemsSM Diagnostic Tools provides a database of 30,000 Artificial Intelligence Algorithms that help ensure nearly all systems alarms can be cleared without local intervention, maximizing availability.
- Responsive fail over to the Public Switched Telephone Network provides another level of protection.

Avaya solutions are able to support more IP-enabled endpoints with fewer restrictions on loads and a smaller number of clustered call servers than other solution providers — resulting in significantly lower expenditures in system management, upgrade management, complexity, and staff time.

Security

The Avaya solution architecture is designed to provide secure communications between all endpoints without sacrificing performance. For example, instead of simply providing encryption of all transported media, Avaya applies an intelligent scheme that provides encryption when needed, minimizing impact on performance. Strong authentication capabilities can be added at remote sites without requiring special software to be loaded into individual devices.

Learn more

The robustness, reliability and security of its IP telephony solutions have made Avaya a global leader in communications. Many government organizations count on Avaya for secure network infrastructure and reliable voice and data applications that help enable operations continuity and recovery. For more information about how Avaya can help you enhance your 911 system, visit avaya.com or contact your Avaya Client Executive or Avaya Authorized BusinessPartner.

TEN REASONS TO CHOOSE AVAYA FOR 911

- 1 911 leadership and expertise
- 2 Increase capacity — maintain local identity
- 3 Reliability and redundancy
- 4 Support for legacy investments/systems
- 5 Multimedia capability
- 6 Security throughout the system
- 7 Fewer standalone systems, lower costs
- 8 Continuity through emergencies
- 9 Real-time reporting
- 10 Wireless support

About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit www.avaya.com.

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