September 2019 Newsletter

September 2019

Artificial Intelligence and the PSAP, Can We Trust It?

Artificial Intelligence or AI, is a common topic on news programs these days. The use of AI and how it influences our daily lives includes: web searches on Google; email filters to clear out junk mail; using social media for finding long, lost friends and family members; and product recommendations from Amazon. There are many other examples of everyday activities driven by AI where AI is being used to develop new medical treatments, driving automobiles, as well as a host of other very complex tasks.

There are many examples of how AI is used on our daily lives, but is AI being used in PSAP technology and operations? The question of AI's use in PSAPs will inevitably cause a discussion revolving around whether AI can be trusted with our 911 calls and the safety of first responders.

This article does not pretend to answer that question, but is intended to provide some insights into how AI is already being used in emergency communications operations. This article will highlight some of the applications where AI is being used in PSAPs now. From our experience, we know that the use of AI in the PSAP will continue to evolve, mostly behind the scene; but in some areas AI is being discussed as a tool to supplement daily operations.

Examples of AI used in or by PSAPs include:

- Natural Language Processing (NLP) is a type of AI. It is the ability of a machine to understand, analyze, and generate human speech. NLP can recognize through voice sentiment analysis whether the caller is in real danger or pain. For example, queue management could possibly be enhanced to prioritize calls within the queue, to ensure that "real" 911 calls are ranked higher than a "butt call".
  NLP applications are already widely used. When we ask our phones to find directions, or ask Siri the weather forecast, we are using NLP. New 911 call taking protocol products are available using NLP to determine voice sentiment.
- Amazon-owned home security company Ring is working with over 200 police departments that have granted Amazon access to real-time Computer Aided Dispatch data. In this scenario, Amazon is using the CAD data to automate and improve decisions made by emergency dispatch personnel and reduce police response times. Amazon uses a proprietary AI application to analyze the CAD data and provide input to dispatchers.
- New call taking and dispatching products using AI that are entering the market include pre-arrival medical instructions modules. For example, both the US-based Association of Public Safety Communication Officer (APCO) Intellicomm and Corti'sOrb product, from a Danish firm,

Winbourne Consulting offers a full range of public safety services, including strategic planning, systems integration, specifications development, solution acquisition, and implementation project management and quality assurance.

developed call taking and dispatching protocol products using AI. Both products analyze the caller's voice audio signal, including acoustic signal, symptom descriptions, tone and sentiment of the caller, as well as background noises and voice biomarkers. These products identify distinctive features of the call automatically and search for patterns that might be useful for the dispatcher.

These and other AI-based call taking products claim to be able to process caller audio input 70 times faster than current systems. The faster processing times will allow the software to tell the call-taker if these are repeat calls, prank, etc. Also, voice and pattern recognition can be employed to assist first responders. The faster processing can also assist the call-taker to recognize a potential medical problem. An example is with some systems, the software can listen in on 911 calls, analyze the words and identify other clues that point to possible serious medical conditions.

The National Emergency Number Association (NENA), estimates there are about 240 million 911 calls made in the US each year. These emergency calls are answered by exceptional people who can calmly, rationally, and with compassion, aid people in their time of need. AI offers solutions that could make those invaluable human response times faster as well as more informed, and result in more people receiving help.

We can all agree that 911 call centers have changed significantly since their introduction 50 years ago. AI is a solution that can not only assist in routing calls more efficiently, but can even shorten the response time to help save lives. With PSAPs continuing to suffer staffing shortages and dealing with the challenges of implementing the continued rollout of new, Internet-based technologies, AI is and can be one of the go-to tools that can provide solutions to these issues.

Let's Talk! Winbourne Consulting has 20 years of worldwide experience assisting public safety organizations in the evaluation of new technologies and products and working with these agencies as they maneuver their way through the continuously changing web of technologies. For additional information, you can contact **Winbourne Consulting** at info@w-llc.com.

Our Areas of Expertise encompass all segments of Public Safety, including:

- **PSAP Consolidation**
- **NG911 Strategic Planning and Implementation**
- **Public Safety Communications and Telephony**
- **Public Safety Applications and Systems Requirements and Implementation Support**
- **Mission Critical Facilities Design and Fit-Out**
- **311 Call Centers and Implementation**
- **PSAP Staffing and Operations Analysis**

Winbourne Happenings

Elko County, in rural northeastern Nevada is one of the last places in the US with "Basic" 911 service. Its three 911 centers cover the County's 17K square miles which includes tribal lands that continue into Idaho. In 2017, **Elko County hired Winbourne Consulting to help them determine** the best path forward to improve the emergency services for the County residents and visitors. **Following the Winbourne team's recommendations, and after a competitive procurement, the County unanimously approved the contract with the selected vendor, NGA911**, to move forward with Next Generation 911. Congratulations to Elko County and NGA911 on this great partnership; we look forward to continuing our service to the people in Elko County.

For more information go to: https://elkodaily.com/news/a-big-step-county-getting-next-generation/article_525cc878-b1b3-5c99-bed6-d118d1afd8da.html

Lisa Madden, Winbourne Vice President, explores the impact of the opioid crisis on the first responder community in an article for the APCO Public Safety Communications magazine. What initially started as an article related to "numbers" evolved into a story about the human impact of the opioid crisis on the telecommunications and first responder community and how that community is adapting to handle the ever-widening epidemic that is threatening our communities throughout the country.

You can find Lisa's enlightening article at: **https://www.pscmagazine-digital.com/pscs/0519_september_october_2019/MobilePagedArticle.action?articleId=1514397#articleId1514397**

Public Safety News

PSAP operations: The transformative power of ESInets
These broadband-enabled networks support the transmission of video, images and other bandwidth-intensive data files.

This article is written by a retired San Jose Fire Dept Communications Supervisor - sharing for educational purposes on Emergency Services IP Networks (ESInet). By Randall D. Larson.

Our Clients include city, county, state, and federal agencies located throughout the United States and the world, as well as countries in Europe, the Middle East, Asia, the Caribbean, and South America.

ESInets are a critical first step toward Next-Generation 9-1-1. These broadband-enabled networks support the transmission of video, images and other bandwidth-intensive data files, thus enabling the sharing of emergency data between public safety answering points (PSAPs).

The complete article can be found at: https://www.policeone.com/police-products/communications/articles/484986006-psap-operations-the-transformative-power-of-esinets/?utm_source=PoliceOne+Member+Newsletter&utm_campaign=5d5cbaccd9-EMAIL_CAMPAIGN_2019_09_25_10_36&utm_medium=email&utm_term=0_ca044a84ea-5d5cbaccd9-41944631

California Awards NG911 Implementation Awards—Largest State-wide NG911 Project in US History
The largest Next Generation 911 (NG911) project in US history just took a major step forward. The California Office of Emergency Services (CalOES) awarded over $400 million dollars in contracts on August 20, 2019. The new NG911 network service will connect the state's 438 dispatch centers, which managed over 20 million 911 calls last year.

The implementation program consists of four regional Emergency Services IP Networks (ESInets) and a statewide overlay ESInet. Each award also includes the NG911 core service software for call routing and caller location.
The contract awards (see map) went to the following firms:

- Atos will serve as the prime contractor for the entire project. Atos' statewide contract is valued at nearly $198.5 million
- NGA911 won two regions—Los Angeles Region and the Center Region. The combined contracts were for nearly $108.6 million
- Synergem technologies won the Northern Region. The contract value is nearly $56.8 million

- CenturyLink won the Southern Region. This contract is also nearly $56.8 million

CalOES will manage the NG911 contracts which can potentially cover a ten-year period with a five-year base period and five one-year extensions available to the state to exercise.
The project is underway now. Meetings between CalOES and the awardees discussing project deployment plans are in process, with site-surveys to follow. CalOES officials have set December 2022 as a target date to decommission the last legacy component of the current 911 network.

Congratulations to all involved! As the project moves forward, Winbourne Consulting will continue to report on its progress.

Industry Events

Since 1893, the IACP has been shaping the law enforcement profession. The IACP Annual Conference and Exposition has been the foundation, providing leaders with new strategies, techniques, and resources they need to successfully navigate the evolving policing environment.

Don't miss out on the opportunity to spend four days with law enforcement leaders from around the globe as they address your most pressing challenges. Register now for the most comprehensive law enforcement conference and exposition in 2019.
For more info: https://www.theiacpconference.org/

October 8-9, 2019
Denver, CO

This two-day event brings together attendees and industry leaders to discuss technologies that are on the horizon and address the challenges of the ever-changing landscape of public safety communications.

For more info: **https://techforum.apcointl.org/**

For more information about our services and solutions, visit our website at:

www.winbourneconsulting.com

Articles of Interest

GCN

AI-Enabled Voice Assistance For Responders

First responders are testing a NASA-developed artificial intelligence tool that may seem like just another Alexa or Siri. AUDREY, however, can turn voice

commands and images into data that facilitates emergency teams' lifesaving work.

Most recently, the Next Generation First Responder (NGFR) Apex program at the Department of Homeland Security's Science and Technology Directorate tested the tool, called the Assistant for Understanding Data through Reasoning, Extraction and Synthesis, or AUDREY for short. The experiment, which took place in April in Ontario, examined how AI could make paramedics more effective and efficient. It was conducted in partnership with Canada's Department of National Defence Science and Technology Organization, Defence Research and Development Canada Centre for Security Science (DRDC CSS).

To read the full article visit: https://gcn.com/articles/2019/08/09/ai-adoption.aspx

RadioResource MissionCritical COMMUNICATIONS | RadioResource INTERNATIONAL

DHS Releases Updated National Emergency Communications Plan

The Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA) released an update to the National Emergency Communications Plan (NECP). The NECP is the nation's strategic plan for coordinating and advancing emergency communications to establish and maintain operability, interoperability and continuity.

Key updates to the NECP include the addition of a cybersecurity goal, an emphasis on formal and flexible governance, and a focus on integrating new technologies.

Visit: https://www.rrmediagroup.com/News/NewsDetails/NewsID/18754 to read the complete article

California Awards Proof-of-Concept Contracts for Fire Detection, Prediction

Northrop Grumman received a $1.6 million contract award from the California Department of Forestry and Fire Protection (CAL FIRE) for a proof-of-concept demonstration referred to as FireWatch.

This contract will allow Northrop Grumman's CAD system, installed at CAL FIRE, to receive fire detection and location information from fused remote sensing data, enabling early detection so that first responders can take quicker action against fires as they emerge.

Visit: https://www.rrmediagroup.com/News/NewsDetails/NewsID/18749 to read the complete article

Look us up on LinkedIn

https://www.linkedin.com/company/winbourne-consulting-llc?trk=biz-companies-cym

statescoop

Congress Moving Closer Toward Cybersecurity Aid To State And Local Governments

Federal legislation creating new grants and other programs designed to help state and local governments with cybersecurity is expected to advance in Congress in the next few weeks, following a year that has seen scores of ransomware attacks against municipalities large and small.

The State and Local Government Cybersecurity Act would represent one of the most significant federal investments in state and local information security efforts, according to the National Association of State Chief Information Officers, which took the rare step in July of endorsing the legislation. The bill by Sens.

Gary Peters, D-Mich., and Rob Portman, R-Ohio, was recently placed on the Senate's legislative calendar, the list of bills ready for floor action this fall.

To read the complete article visit: https://statescoop.com/congress-moving-closer-toward-cybersecurity-aid-to-state-and-local-governments/

FirstNet Authority Board Approves Plans To Enhance FirstNet Core For 5G, Expand Deployable Coverage Capabilities

FirstNet Authority board members voted unanimously to have the organization's staff begin procurement processes to reinvest funding into making the FirstNet LTE core ready for 5G services and to expand the FirstNet deployable-network program.

Both area identified for reinvestment were expected. FirstNet Authority Chairman Ed Horowitz previously identified deployable enhancements and preparing to make the physically separate FirstNet LTE core ready for 5G services as priorities for the organization during July's PSCR meeting in Chicago and reiterated those targets during a presentation last month at the APCO event in Baltimore.

The full article can be viewed at: https://urgentcomm.com/2019/09/19/firstnet-authority-board-approves-plans-to-enhance-firstnet-core-for-5g-expand-deployable-coverage-capabilities/

We Are Interested in Your Thoughts on the Above Topics.
To share them with us, please:

Email us at: info@w-llc.com
Or
Twitter us at https://twitter.com/winbournellc

For more information about our services and solutions, visit our website at:
www.winbourneconsulting.com

Look us up on LinkedIn
https://www.linkedin.com/company/winbourne-consulting-llc?trk=biz-companies-cym