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# 911 director's thesis written in real-time

## Center for Homeland Defense and Security

Naval Postgraduate School, Monterey, California

# 911 director's thesis written in real-time

Master's degree alumnus Carl Simpson entered CHDS with an ideal thesis topic in mind.

Simpson had moved from Portland, Oregon, to Denver 911 as its director as enrolled at CHDS and has brought his thoughts on broadening the scope of emergency call center information as he researched his thesis.

The thesis, "Information Sharing From 9-1-1 Centers," analyzed an information-sharing system designed to share emergency call data with trusted municipal partners, including schools. That came with a goal not to over-inundate principals or other users with information to the point they became desensitized to the alerts.

**Download the paper:** "Information Sharing from 9-1-1 Centers"

1) Simpson was able to link his pursuit of a different kind of information system for his profession with his CHDS master's degree research – writing as the research, experimentation and tweaking unfolded.

Simpson engaged Portland-based Swan Island Networks Inc., a company that works with businesses and governments, offering a product it calls Trusted Information Exchange Services, or TIES, for Microsoft CityNext. TIES "aggregates and manages potentially thousands of live information streams to provide actionable intelligence dashboards and a complete suite of smart and mobile alerting capabilities to ensure authorized participants have the timely information they need," according to the Swan Island Networks website.

The concept departs from the traditional military view of data that law enforcement agencies have traditionally followed – sensitive data with a singular focus that is not easily shared and typically requires high-dollar contractors to build, noted Swan Island Network CEO Charles Jennings. Application-based products aiming to improve situational awareness and a common operating picture have proliferated since 9/11 as agencies of all levels of government struggled to adjust to a new era of security threats.

"TIES was able to scroll down to a mile radius of an incident, so we could tailor our contact," Simpson noted. "When an alert went off it meant something. It was information the principal needed to know."

The problem for many agencies is an over-abundance of data. Swan Island developed TIES to enable end users to tailor information pertinent to them. The system was designed to share 911 data with trusted municipal partners, including schools, but not to over-inundate principals or other users with information to the point they became desensitized to the alerts.

"It's one thing to have access to massive amounts of data," Jennings said. "It's quite another to provide information usefully that really helps people. The art is being precise. We call it putting the nozzle on the fire hose."

That was the kind of tailored information access Simpson was seeking.

2) Simpson's homeland security epiphany came the day he visited an elementary school while he was working in Portland, Oregon, as part of a Principal for a Day program and witnessed a school administrator who was a master multi-tasker facing a series of snap decisions.

Among those decisions was to recess outside or inside in the rain-prone Pacific Northwest. During recess time, Simpson noticed pockets of children spread from the school building across the blacktopped playground to the fence at the property's boundary. He knew back at his 911 communications center calls were coming in about burglaries, shootings and other life-threatening emergencies.

"This was an amazing paradigm shift for me," recalled Simpson, a September 2014 Center for Homeland Defense

and Security [Master's Degree](#) graduate. "I always thought 911 data was personal. I took efforts to keep it confidential. But it dawned on me how valuable our information could be to the school principal about making decisions to send children outside for recess."

Extrapolating that idea further, what if the principal was informed about a strange car in the neighborhood? Or a chemical leak? The principal could then make decisions about students' safety in real-time as relevant 911 information was shared.

"That was the epiphany; that we need to do more with 911. 911 emergency call centers are the intake centers for 85 to 90 percent of public safety data, but data is popped into a silo, then the call-takers decide whether it's an emergency medical or fire call for service," Simpson said. "Most of the call volume is law enforcement related. That is the biggest chunk of information that needs to be shared."

3) Simpson had moved from Portland to Denver 911 as its director prior to enrolling at CHDS. He implemented the new information system in partnership with Swan Island Networks and the Colorado Intelligence Analysis Center (CIAC).

Simpson and Swan Island began collaborating with the Colorado Intelligence Analysis Center (CIAC). The solution to sharing information lain in TIES and Computer Aided Dispatch (CAD) technology. Denver 911 would use TIES to distribute its data to partners that included the CIAC. Analysts at the center could verify and distribute the information to the appropriate localities.

For schools that are trusted partners that means information coming in to Denver 911 from an adjacent suburb would still find its way to the site. Using TIES, a principal can receive the alerts in real-time. Moreover, the TIES dashboard can overlay an array of information – weather, registered pedophiles in the neighborhood and more.

"It just closed a gap," Simpson noted. "It's probably one of the things I am most proud of about working in Denver. I was able to facilitate relationships and commitments, every morning at 5 a.m. I would receive a text message from the Denver 911 CAD system that the CIAC interface was working."

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Associated file: [Information Sharing from 9-1-1 Centers](#)

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