Versaterm

Versaterm OpsIntel

Reducing Crime Through Real-Time
Information Sharing and Collaboration

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Introduction to Reducing Crime through Real-Time Information Sharing and Collaboration

Some forward-thinking police departments have found a way to significantly reduce crime, while enhancing community relations, by making use of technology like the crowdsourcing and real-time collaborative power that drives social media. These police agencies, and the communities they serve, are benefitting from deploying real-time reporting and information sharing systems that enable a process known as sense-making directly out to their officers in the field.

The solution, Versaterm OpsIntel, was designed with the guidance of John Bennett, who retired as the Assistant Chief of the Tampa Police Department. Versaterm OpsIntel is based on innovative real-world practices he implemented while with the Tampa Police Department and formalized in the thesis he wrote at the Naval Postgraduate School.

The essence of Bennett's work with Tampa PD, and the focus of his work at the Naval Postgraduate School, was to give police officers in the field the kind of real-time information normally associated with crowdsourcing and blogging. He sought to free police-generated data from backroom analytics and put it at the fingertips of officers patrolling in their cars. An innovative part of the solution is the ability for officers to share real-time information through uploading keyword snippets of data and observations for others to view and respond to. And all the information is geo-coded to avoid the issue of "too much information." One of the major benefits from this gathering of information is that it helps to de-randomize police efforts. And it helps an agency achieve a strategic focus that enhances the efficiency and effectiveness of policing.

Real-World Results

Before taking a deeper look at the technology of Versaterm OpsIntel, and a closer look at how it works in the field, here are some real-world examples of the transformative benefits that come from harnessing the technology and placing it in the hands of officers in the field:

Tampa Police Department recorded a 40% drop in targeted (FBI UCR Part One) crimes after the first month of deploying the tactical Intel-led process embedded into Versaterm OpsIntel. The department has a 6-year average reduction of the targeted crimes of 33% with burglaries being down 55% and clearance rates up 2%.

Bloomington Police Department recorded a 90% reduction in auto thefts after deployment of Versaterm OpsIntel, and by their one- year of use anniversary, credited Versaterm OpsIntel for an overall 20% drop in property crimes.

"We used to maybe have two or three burglaries a day, and now we are down to maybe five or six a week."
- Chief Michael Diekhoff, Bloomington Police Department

"Our department has benefitted from our partnership with Versaterm OpsIntel [formerly Street Smart]. This patrol-centered software has allowed our offers to leverage multiple data sources in real time enhancing situational awareness. Without question, Versaterm OpsIntel [formerly Street Smart] is the force-multiplier in our crime-fighting efforts."
- Chief Dan Giustino, Pembroke Pines Police Department

Providing Real-Time Analytics & Reporting for the Officers

Two decades ago, the New York Police Department introduced the CompStat (short for Comparative Statistics) approach for collecting and analyzing crime data as a way of using business intelligence to fight crime. While this was a step forward, CompStat data is typically analyzed and distributed on a weekly or monthly basis, and at a strategic level. This translates into data processing delays and the need to re-distribute this already aging data back to the tactical level or critical mass of the organization. Versaterm OpsIntel is designed to share criminal activity and information and intelligence from the field on a real-time basis–while providing law enforcers the ability to zoom in and out on tactical data from a geographic standpoint, or to filter for types of crimes, specific criminals, and other sense- making overlays to achieve probable cause as efficiently as possible.

In a sense, Versaterm OpsIntel is like crowd-sourcing intelligence across all of the law enforcers currently on duty within a zone or beat, as well as in a district or across the department. Versaterm OpsIntel arms law enforcers with critical, real-time crime data while on patrol in the community's streets. This high-speed information sharing enables law enforcers to combat crimes faster by visualizing data points on maps and allowing police to aggregate and share relevant information through situation-based bulletins and police blogs. This all happens a step ahead of the records

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cycle based on the agency's strategic focus and empowers the front lines to include dispatchers and analysts.

Law enforcers no longer need to rely solely on a roll call board, information on note pads, meeting takeaways, or other disparately distributed information and intelligence. Crime data can be in one common and custom operating picture that is updated around the clock. Having information readily available helps solve crimes more quickly, which will also help reduce criminal activity.

Observations from the Field

The significance of real-time sharing is underscored by police who have experienced it. Some of their observations include:

Sense-Making

"We started by having a weekly tactical meeting in one of our districts, and we realized a by-product of that meeting was this crowd-sourcing effect in which the officers were putting their problems and concerns out there and others were providing sense-making. That was the epiphany for us to say: "What if we moved this whole process into the front seat of the police car?"

- John Bennett, retired Assistant Police Chief, Tampa Police Department

Simple User Interface

"Our officers can upload photos of suspects or vehicles from surveillance cameras. If the officers take a picture of someone on the street they can upload that into the system, and it gets the information immediately to the other officers down the street."

- Chief Michael Diekhoff, Bloomington Police Department

Situational Readiness

"Before we had a dozen different databases to try to go through. Having them all in one spot is amazing, and then to allow detectives and officers to converse about cases in a real-time setting is just amazing."

- Captain Steven Kellams, Bloomington Police Department

Tactical Intelligence-led Policing (ILP) Between Shifts and Agency Functions

"We had a burglary theft ring going on and different officers shared their information through Versaterm OpsIntel [formerly Street Smart] and officers started connecting the pieces. In this one example, we cleared up 10 burglaries, and recovered three stolen vehicles. That was a major deal."

- Chief Michael Diekhoff, Bloomington Police Department

Fast Arrests, Resulting in Less Crime and Fewer Victims

"We had 15 felony crimes reported during one shift. We made an arrest on every one of those 15 crimes. And we made those arrests before the shift ended."

- Detective Lieutenant Brad Seifers, Bloomington Police Department

Instant Information Sharing

"Arrests happened because we put the information out there on Versaterm OpsIntel [formerly Street Smart] and everyone was seeing it - people started connecting the dots. This program is exactly what was needed."

- Chief Michael Diekhoff, Bloomington Police Department

Taking a Closer Look at Versaterm OpsIntel Features

Versaterm OpsIntel provides law enforcement organizations a powerful suite of tools that have been crafted with the input of enforcers in the field. The user interface and synthesis of mapping, blogging, bulletin making and case management was all done by the front lines since they were the end-users. The Versaterm OpsIntel suite of tools includes:

Crime-Fighting Discussion Forum

Provides a backbone for collaborative problem solving and brings information to an enforcer's attention in real-time, days or weeks faster than traditional methods. Using geo-coding, blogging can be done locally within a zone, beat, or district, across adjacent districts, or across the full department and region–depending on relevancy and need.

Bulletin Management

Centralizes information in one searchable location, in near real-time, delivering important bulletins to officers in the field, and enabling enforcers to immediately create (and recall or update) their own bulletins readily. This is a big advancement compared to other non- indexed delivery methods such as e-mail or hard copies.

Map Viewer

Provides instant visualization of crime patterns in a specific location by displaying color-coded dots that show reported crimes and the locations where they were committed. Additionally, the sense-making overlays of data allow enforcers to see patterns, identify potential offenders, and view effort being done to solve the crimes.

Mobile Capability

Empowers LEO's to share information and intelligence in real time on any Android or iOS device.

Case Management

An on-line notebook where law enforcers can pass information from shift-to-shift and from cycle-to-cycle in real-time, providing the same kind of situational awareness as medical charts provide in a hospital.
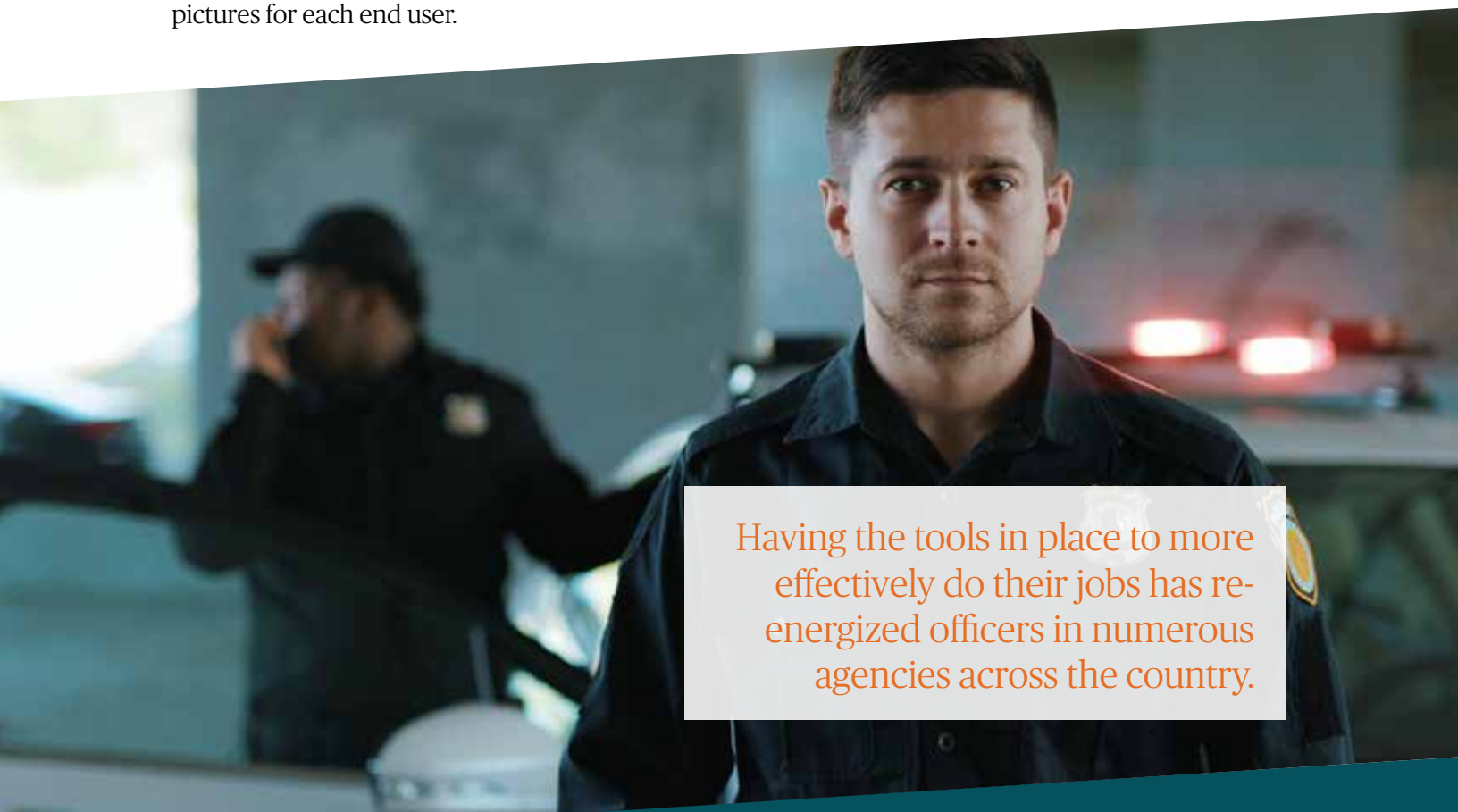
Optional Data Feeds

Provides the ability to analyze data to draw conclusions via sense-making that result in actionable items that reduce crime.

CAD Data

Versaterm OpsIntel compliments traditional CAD/RMS systems by enabling CAD records to be created, providing officers with analytical trends.

Synergistic Effect

Together, the tools of the Versaterm OpsIntel suite provide a synergistic effect, with the creation of a real-time feedback loop that go beyond what any element can provide. The suite harnesses tactical ILP in a way that allows creation of highly effective common–as well as custom–operating pictures for each end user.

> Having the tools in place to more effectively do their jobs has re-energized officers in numerous agencies across the country.

The Need for Real-Time, Data-Driven Systems

Most police departments currently work with informational frameworks that slow the flow of information to enforcers in the field, which typically represent 60-75% of the workforce dedicated to stopping crime. After an officer writes a police report it typically goes into a records management system over the course of 24 to 72 hours, after which it's eligible to be processed for intelligence by an analyst. By the time reports based upon the data make their way out to officers it could be anywhere from several days to weeks, or a month or more. All such delays help the bad guys, committing crimes in the community.

Additional information is lost as each shift changes, and there isn't an efficient way to transfer information directly to those coming on duty. Informational slippage also occurs when information does not get shared between geographies and various jurisdictional layers.

In contrast, a solution such as Versaterm OpsIntel helps agencies by providing an ever-updated common operating picture that produces real-time situational awareness and historical, tactical ILP allowing artificial experience to defeat resource attrition from taking away institutional knowledge. Versaterm OpsIntel powers the collaborative opportunity to work with strategic information technologies. Without Versaterm OpsIntel, strategic data systems too often get stuck or under- actionized to the front lines. This is where Versaterm OpsIntel meets that process–whether predictive based or CompStat based.

Providing officers on the street with a real-time, data-driven system which they can both refer to and contribute to, provides police and the communities they serve with several benefits, including:

Most police departments currently work with informational frameworks that slow the flow of information to enforcers in the field.

- Enhanced Officer Safety
- Reduced Crime through Supporting Technology Offering Proven Results
- Improved Community Relations through Focusing on the Criminal Activities that Produce Strategic Risk to Each Neighborhood

Enhanced Officer Safety

Officer safety is enhanced through speedier and expanded information sharing which creates a more precise common operating picture, along with real-time updates for situational awareness. The faster officers can share information in the field, and the more quickly they can search for relevant data, the more safely they can navigate the challenges they encounter. In a recent FBI study, the Tampa Police Department was cited as one of the best jurisdictions for both officer safety and crime reduction. The findings were correlated to a survey of law enforcers within the study naming situational awareness and offender intelligence in real-time as the key to this safety.

Reduced Crime Through Supporting Technology Offering Proven Results

Information accuracy, speed, and reliability in the field can ultimately improve line level situational awareness, which in turn can reduce crime by helping officers to rapidly identify offenders, as well as trends and patterns. Providing real-time data–as well as a feedback loop–between officers is more efficient than waiting for analysts to build maps after the records management process occurs and then wait for managers to interpret these maps and reports.

Why can crime not be validated, mapped, and visualized immediately then crowd sourced for faster case solving? With dozens of officers and sometimes hundreds working the ground every day, why should a commander or analyst inside an air-conditioned office be driving the next or only strategic move instead of the officers working the street?

A surprising result that emerged with the Tampa Police Department was that the use of Versaterm OpsIntel, with its real-time data sharing, helped officers to reduce crime levels–while at the same time making fewer arrests.

"We knew we were changing the way policing was happening in Tampa," Bennett says. "One of the amazing unintended consequences of our information sharing was that at the same time we were lowering crime, our arrests were going down as well. We were using less muscle and more sophistication to reduce crime."

Bennett says the real-time data and information sharing helped the department to "focus on the smaller group of serious offenders that have an 80% impact on the crime."

Chief Michael Diekhoff of the Bloomington Police Department says: "It's gotten the officer on the street to really think about crime reduction, where in the past they were too often just report takers."

Improved Community Relations

Giving officers more precise and timely information not only helps reduce crime, but it also improves community relations because the data helps officers to be more focused on where their efforts are best applied.

"It's unfair when a sergeant tells his officers to simply go out on the street and make things better," Bennett says. "Because if my sergeant tells me to go out on the street and just generically make things better, I'm just going to go out and randomly do what I think might work. It could be good. It could be bad. But if I have real-time data in front of me, I'm able to better focus my efforts. I can use this real-time business intelligence to keep me on track, rather than just engaging in random policing."

Bennett speaks of what he terms "exculpatory intelligence"– meaning that the system provides information that is so fresh and so precise that officers–and community members–can do more than stopping people based on hunches, or generalized information that is typically poorly distributed and poorly managed.

For Example: The Burglar with a Cast on His Arm

Bennett provides a real-life example of how such information was used in looking for a burglary suspect. An officer investigating a commercial burglary found that the business's video surveillance camera provided a good photograph of the suspect–including the fact he had a cast on one arm. The officer used the photo and description to upload a bulletin about the crime to share with other officers in his district.

A couple of days later, an officer who had read the bulletin saw a man walking down the street with a cast on his arm in the same area as the burglary. "The officer typed the word 'cast,' into his system and the bulletin came back up," Bennett says. "He looked at the photo, and back at the man. He didn't stop him because he saw that the cast was on a different arm. And that's the kind of surgicality that's needed to reduce tensions in communities where some members feel they are needlessly stopped by police."

A Serious Tool

Tampa PD and other agencies have found Versaterm OpsIntel to be an easy solution to roll out, and to be a tool that is treated seriously by officers. Tampa rolled out Versaterm OpsIntel in 2012. While the Tampa PD didn't require officers to use Versaterm OpsIntel, the department found its officers eager to embrace it, making it part of their daily routine.

Part of the roll out included clearly stating that it was a Tactical ILP tool, and that anything entered into it, like all law enforcement data, becomes part of the public records and is subject to review for exemptions.

"We told everybody what the rules of engagement were," Bennett says. "We said, this is your tool. There's no mandated use level. Everything you put in there is discoverable. Discoverable in court. Discoverable to Internal Affairs. Discoverable to your mother. Every keystroke is captured."

The results?

"In nearly six years, we've never had a disciplinary issue, have never had to redact a single word," Bennett says. "Our officers know it's a serious environment. It's an environment to fight crime and to keep each other safe. And I think they respect that."

Some Case Studies

Tampa has found that great things happen when you empower officers with real-time information sharing and harness the intelligence that can emerge from giving them the ability to effectively crowd-source amongst themselves.

Perhaps the best way to gauge the power of Versaterm OpsIntel and its information sharing power is to see some of the ways in which it has been used in Tampa.

The fact that the burglar was from another city, made it all the more important that he was apprehended the same day.

To Catch a Thief

Investigating a burglary which was captured by a surveillance camera, the officer took a picture from the surveillance screen and then created a bulletin while sitting in his patrol car, and put it out to the department within minutes.

A couple hours later, in a completely different area of town, another officer who had seen the bulletin, saw the suspect walking down the street wearing the same clothes as shown in the surveillance shot. He detained the suspect, and found he still possessed stolen property from the commercial address.

"Typically such a crime would have been reported and then perhaps three or more days later a detective, based on their priorities, might have become involved," Bennett says. "By that time this out-of- town burglar would have been long gone, or at a minimum, would have changed clothes and may have still been in the community committing burglaries. If you don't catch them right away, they're going to keep on committing crimes."

Solving a Burglary and Recovering "Heavy Firepower"

An officer responding to a residential burglary found that the homeowner was a collector of military-grade weapons. The thief had taken heavy firepower and thousands of rounds of ammunition.

The officer went onto the Internet and confirmed every gun by picture with the victim. The officer then issued a bulletin immediately for officer safety. The bulletin included photos of every weapon stolen. It also carried a photo of a car that was seen at the house–a green Chrysler Pacifica.

The officer found that when he typed the word "Pacifica" into the search engine, it brought a bulletin back from some months earlier for a suspect wanted for robbery that also had a green Chrysler Pacifica. This enabled an immediate investigative track to begin.

Catching a Scrap Thief – with the Scrap Still on His Truck

An officer responded to a business that had been hit by metal thieves. The thieves had stripped the metal siding from his building. The theft was captured by surveillance video. The officer created a bulletin, including photos of what the siding looked like and what the vehicle looked like. Within just minutes of the officer sending the bulletin, another officer read the bulletin and saw the vehicle filling up with fuel at a gas station–with the siding still in the back of the truck. The suspect was arrested.

"Without this kind of real-time reporting and information sharing, it's unlikely this crime would have been solved," Bennett says. "It would have just been a police report that went nowhere, just an insurance claim."

Busting an Auto Theft Ring

Faced with an increase in auto thefts, Tampa Police used Versaterm OpsIntel mapping features to map the crimes, and to see where the thefts were occurring, the types of cars taken, and the method of operation. This information helped officers to identify a stolen car, while the thief was still in it. An arrest was made and the thefts stopped. Bennett notes: "Without this kind of situational awareness of location and vehicle types and MO, the thefts could have continued for months." The value of solving the case is underscored by the fact that the thieves were working cross-jurisdictional, and the auto thieves were using the cars to commit more serious crimes, demonstrates the need for regional tactical intel-led policing.

Reducing Juvenile Crime

Reducing juvenile crime is important for two reasons. The first is that community members are impacted by the crimes, especially the burglary, auto burglary, auto theft, and robbery that Tampa was tracking. Secondly, juvenile crime unchecked can serve as a gateway into a life of crime.

After arrest, many of the juveniles were placed on home detention by the judge in lieu of secure detention pending court and the ratio of home checks by juvenile probation officers was not effective. Patrol officers decided to help. The patrol officers were given a list of juveniles on home detention by patrol zone. The offending juveniles were uploaded for overlaying on the crime maps for the sense-making process to occur like other offenders as well. The officers introduced themselves to parents or guardians. After offering community-assistance opportunities to avoid a life of crime, the patrol officers would make these checks several times per day and make violation arrests as necessary. Juvenile crime plummeted.

Identifying Persons of Interest

Often there are open cases involving dangerous offenders that don't quite reach the level of probable cause due to the need for additional information. Detectives often know "who did the crime" particularly in cases such as homicide, yet the exhaustive process for prosecution allows the dangerous suspect to remain on the street. Even if this case flow is placed into a police report, the critical mass can't quickly mine or, worse yet, be tactically aware of this danger.

Versaterm OpsIntel allows case detectives to share the risk factors of these persons of interest and allows enforcers to be aware and manage their safety in the field. After two years of using Versaterm OpsIntel, Tampa PD had 110 search returns for such persons of interest for homicide alone in their Versaterm OpsIntel system.