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EDITOR'S INTRODUCTION

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LAW ENFORCEMENT

SJA takes a look at law enforcement in the Americas and how physical and cyber spaces create a new dimension to protect

Welcome to this month's Special Report on the topic of Law Enforcement, produced in partnership with BlackRainbow.

Police forces across the Americas face challenges every day to tackle crime and also resolve cases that have already been committed. As such, there are a variety of solutions available to officers to help them with these processes.

However, making sure that any equipment is kept up-to-date, that officials have the correct training and that criminals do not counteract any progress is essential. To prevent this, companies are working to provide law enforcement with the best tools for the job.

A new age

Traditionally, police would only have to protect or investigate physical crimes – for example, if criminals stole from others, caused damage or physical assault.

However, the cyber world of today has added a new dimension to how criminals can operate and provides them with a non-physical way to take property from others. Additionally, the increase in IoT devices has converged the physical and cyber world together, meaning that police also encounter threats from those who utilize devices to their advantage for physical gains.

Despite this challenge presented to law enforcement, there is also opportunity; rising to the challenge that criminals present means officers can use innovative methods to their advantage.

> **THE CYBER WORLD OF TODAY HAS ADDED A NEW DIMENSION TO HOW CRIMINALS CAN OPERATE AND PROVIDES THEM WITH A NON-PHYSICAL WAY TO TAKE PROPERTY FROM OTHERS.**

Particularly for police officers and detectives who are investigating offenses that have already been committed, using the wide range of tools available helps to keep the peace and resolve crimes. One example is surveillance, which has evolved past the analog CCTV used traditionally. Now, surveillance is often paired with AI and means that police can streamline their investigations, giving them more time and resources to spend on other important activities.

Other examples include biometrics and DNA technology, GPS tracking and body-worn cameras, which all help officers to catch criminals and provide them with the required evidence they need for charging.

Although there are many tools on hand at hand to help, keeping track of all avenues of information can pose a problem – thankfully, there are even more solutions that can help law enforcement to stay organized.

The benefits that all these can bring to law enforcement in the field are undeniable and ensuring that officers are equipped with the latest technologies provides them with more resources to carry out their jobs effectively. ∎
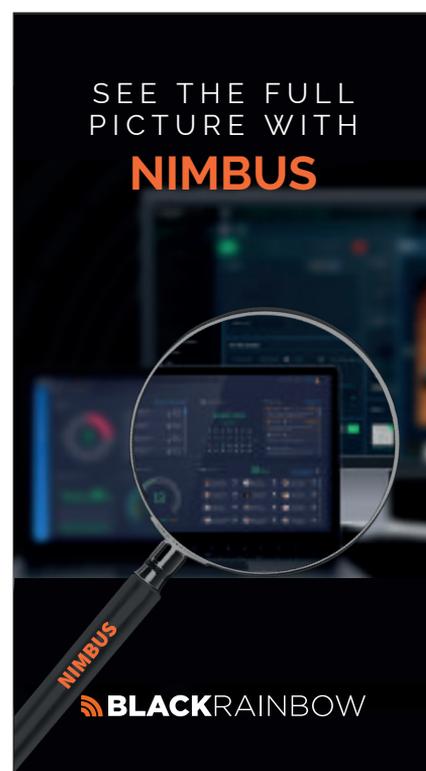
EQUIPPING LAW ENFORCEMENT

Giving law enforcement officials the tools they need is the key to tackling crime effectively

I n the Americas, law enforcement plays a crucial role in maintaining order. Officers throughout the region help to catch criminals and prevent illegal activities from taking place.

Law enforcement encompasses a wide range of jobs, including, but not limited to, uniformed patrol officers, police detectives, state police and highway patrol officers, transit and railroad police, sheriffs, border patrol agents, crime scene investigators and many more.

It's essential that to complete these roles, officers in law enforcement are properly equipped to handle any potential situation.

Crime in the Americas

Crimes of varying consequence and severity are the reason that so many specialized officers are required, to ensure that the corresponding training and tools are at hand. While these law enforcement officials absolutely help to reduce offences, crime continues to be reported in the Americas.

MacroTrends says that in 2020, the crime rate in the US was 6.52 per 100,000 of the population, up from 5.07 in 2019 and 5.01 in 2018. In Brazil, the crime rate was 22.45 per 100,000 of the population in 2020, up from 20.88 in 2019.

> **PARTICULARLY IN AN INCREASINGLY DIGITAL WORLD, LAW ENFORCEMENT MUST EXPLORE ALL AVENUES DURING INVESTIGATIONS.**

Not only are crime rates increasing in parts of the Americas, but so is the sophistication of criminals. Although technological progress can bring about enhanced strategies for police to catch criminals, it also provides them with even more opportunities to potentially escape capture. It's therefore key for law enforcement to keep track of new ways that criminals may carry out their actions.

To combat these crime rates and to minimize illegal activities, officers are needed in every country. According to Statista, in 2021, there were more than 660,000 police officers in the US and more than 70,000 in Canada.

To carry out their roles every day, law enforcement officials are

"Our mission is to reduce the i

Aiding investigations

BlackRainbow is one company that has risen to address this challenge. During investigations, law enforcement officers have vast amounts of data that must be shared with multiple people. The company's NIMBUS solution provides control and oversight to any investigation allowing users, process and technology to work together within one platform.

"Gathering this data and converting it into relevant, useable information for presentation as potential evidence is not simple, nor straightforward," says Nikki Moscrop, Head of Law Enforcement & Government of BlackRainbow, on the company's website. "At BlackRainbow we have designed NIMBUS, a solution to streamline this process and optimize decision making while maintaining investigation integrity and disclosure rules."

"From listening to the needs of policing, we built NIMBUS to be intuitive, with an interface that is highly configurable and flexible, meaning a system that now fits with how you work today and in the future," added Moscrop.

"As forces now become streamlined, stronger and collaborative when bringing together the intelligence and information, the knowledge and the specialist skills to fight complex crime and terrorism, in turn, will significantly strengthen the ability to keep the public safe." ◾

required to use a wide range of different equipment and tools. These include protective measures such as tasers, pepper sprays or firearms, communication devices like radios and other technologies such as software.

Not only can these aid officers in keeping track of cases, but they can also help to expedite the investigative process.

Particularly in an increasingly digital world, law enforcement must explore all avenues during an investigation – when working on a case, this can mean a huge amount of data to keep track of that sometimes cannot be done manually.

Therefore, certain tools can help to ease this process.

Forensics is one area that has converged both the physical and digital side of investigations and shows no signs of slowing down. ResearchandMarkets reveals that the global market for forensic technologies and services, which was estimated at $24.3 billion in 2022, is projected to reach a $61.6 billion by 2030, growing at a compound annual growth rate (CAGR) of 12.3% over the forecast period.

Law enforcement therefore have a range of tools at their fingertips, but knowing which are the right ones to use may not always be clear.

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investigation lifecycle through intelligence, efficiency and integrity."

The evolving challenges facing today's detectives

A high-quality case management system that stores material in one place can aid investigators in a world of exponential digital data growth, says BlackRainbow

In 1829, the then Home Secretary of the UK, Sir Robert Peel formed the Metropolitan Police Service. The formation of an organized police service and later a detective branch within that service was replicated around the world during the mid to late 19th century and in 1908, the US Attorney General, Charles Bonaparte established a team of investigators to conduct investigations for the Department of Justice – an event that is now celebrated as the birth of the Federal Bureau of Investigation (FBI).

Since then, the ever-evolving cycle of advances in technology being countered by the innovation of criminals to adapt and evolve their practices to avoid capture and prosecution began.

The constant and continuous need for law enforcement to review, revise and update their practices and processes has been the foundation for some of the greatest technological advances of our time being developed and embedded into criminal justice systems around the world.

For example, huge advances were made throughout the 20th century with the first fingerprint and then later DNA evidence becoming not just accepted, but often expected forms of evidence. In the space of just a few decades, what was once considered groundbreaking science is now routine normality.

Some of the most high-profile cases in history have been detected as a direct result of fingerprint and DNA evidence and no doubt many will continue be solved in this way for years to come, but there is a new kid on the block that is already testing the capacity of law enforcement around the globe.

Digital spaces

As we progress through the 21st century, it is clear that the explosion and prevalence of data presents the next opportunity for law enforcement. The exponential growth of digital data in every aspect of our daily lives is something that could not possibly have been properly envisaged by many and is something that is only likely to continue for the foreseeable future.
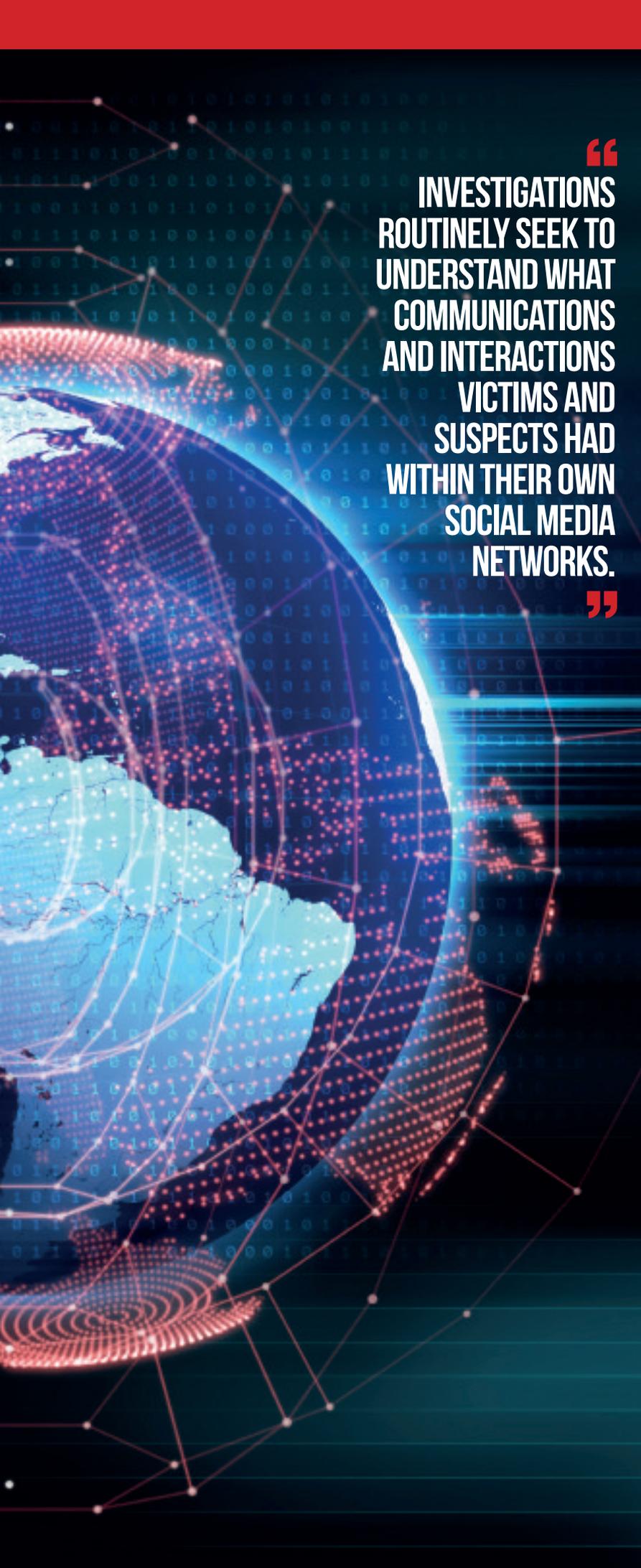
> **" INVESTIGATIONS ROUTINELY SEEK TO UNDERSTAND WHAT COMMUNICATIONS AND INTERACTIONS VICTIMS AND SUSPECTS HAD WITHIN THEIR OWN SOCIAL MEDIA NETWORKS. "**

What started with mobile phones taking over from diaries and Filofaxes is now a digital footprint belonging to each and every citizen, with each person's footprint being unique to them – whether that be social media profiles, use of online banking, logging in to Wi-Fi hotspots, use of passwords and logins or websites accessed on the internet. Every digital footprint is slightly different and the investigative possibilities with them all are endless.

With such great opportunity comes great challenges for the detective tasked with investigating a reported crime or the actions of a particular suspect. In one respect, these challenges aren't new. Law enforcement has always adapted its practices to meet the demands that are placed upon it and it will continue to do so, but the need is pressing and immediate.

The real challenge isn't the ability of an investigation to present digital evidence in a manner that a court will consider compelling enough to convict, but rather one of establishing systems and processes that allow a detective to sift through the vast amount of available material in order to identify what is relevant and what is not. This is a challenge that is multiplied several times over when the ever-growing workload of the average detective and the ever-increasing expectations of the public they serve are thrown into the mix.

Evolution of evidence

Several investigative strategies in a routine modern day investigation and have changed over time.

CCTV – the task of scouring a crime scene for CCTV evidence once involved walking the area and identifying fixed camera points. From there, appointments were made to recover the video tape for the relevant time period. Today, the same task involves scanning and assessing material that might be recorded on dash cams, doorbells, passing buses, mobile phone footage as well as the more traditional fixed cameras. The range ▸

of sources of CCTV and the volume of material recorded by each device has also multiplied considerably.

Social media – the opportunities that social media communication can offer an investigation are endless. Investigations routinely seek to understand what communications and interactions victims and suspects had within their own social media networks at the time of an offence and in doing so, huge

> ## THE EXPLOSION AND PREVALENCE OF DATA PRESENTS THE NEXT OPPORTUNITY FOR LAW ENFORCEMENT.

volumes of irrelevant information in the form of digital data are also gathered. The strategies required to map out this process and define what should be done were simply not required 15 years ago when social media as we know it did not exist and formed no part of an investigation.

Witnesses – the traditional methods of identifying potential witnesses largely involved a physical presence by the investigator in or around the area of interest. Doors would be knocked and questions would be asked, all in the pursuit of someone who might have seen something. While this approach is still important, the interconnected world that we now live in offers a much quicker and easier route to identifying more and more people that may have relevant information. With more people comes a greater volume of material.

Forensics – even the term forensics has now expanded. It is no longer the sole domain of scientific examinations in a laboratory looking for traces of fingerprints and DNA, but now includes digital forensics – the examination of digital devices and the extraction of data from them. The product of digital forensic examinations in terms of the volume of material produced has grown since the 8 MB capacity of the earliest smartphone to the 128 GB now commonly encountered today.

Nurturing skills

As investigations have grown more and more complex, the level of scrutiny that they are placed under has also increased. This scrutiny is no longer the sole preserve of the most high-profile cases of homicide or serious sexual offending, but different cases

of all crime types are likely to be subject to review and assessment, comment and conjecture in varying degrees of usefulness.

It seems that everyone wants to be a detective for five minutes and pass judgement on what should or shouldn't have been done and what can or cannot be inferred as a result. Of course, it is impossible to be a detective for five minutes as it takes years of training and practice and is a role that requires you to constantly evolve your skills.

Nonetheless, the ability of the modern-day investigator to effectively gather vast volumes of material, sift and assess that material for relevance and keep clear and well documented priority lines of enquiry on track while at the same time avoiding

any of the distractions or pitfalls that lay ahead are core skills of the modern-day detective, regardless of the type of case being investigated or the rank of the lead investigator. These are skills that cannot be taught solely in a classroom.

> ## LAW ENFORCEMENT HAS ALWAYS ADAPTED ITS PRACTICES TO MEET THE DEMANDS THAT ARE PLACED UPON IT.

They are skills that require continuous practice and improvement if law enforcement is going to maintain its centuries old track record of constantly evolving to effectively counter the innovation of those that commit crime.

The role of technology

There is a much used saying that "the devil is in the detail" and often this is true, but there is a real and imminent risk that the detail will become lost amongst the vast volumes of material gathered in a case unless there are robust systems and processes in place to help.

It seems inevitable that there will need to be an increasing reliance on the use of technology itself to take some of the strain. A high-quality case management system that allows investigators to store material in one place, assess its relevance or importance, keep track of forensic submissions and the subsequent results of examinations and be a place to record decisions and task activity is an absolute must have.

One such system is produced by BlackRainbow. NIMBUS is currently in use in a wide variety of law enforcement and investigative functions worldwide and their latest offering 'Investigator' has used the subject matter expertise of experienced detectives to develop a solution that will meet the demands of the future.

Since Sir Robert Peel's formation of the Metropolitan Police in 1829, it has always been the case that technology and science has evolved to enable law enforcement to stay one step ahead... long may that continue.