NUIX OFFERS SOLUTIONS IN RESPONSE TO NPCC DIGITAL FORENSIC SCIENCE STRATEGY

The Digital Forensic Science Strategy document published in 2020, highlights some of the main challenges within the police forces today throughout the United Kingdom

The report was written after consultation with respected forensic science bodies and the police. It calls for more engagement between external technology providers and internal police information and communications technology teams, to inform and develop digital forensic analysis capabilities. It has been identified that closer collaboration is required with consumer technology providers to work alongside digital forensics teams, improving and streamlining the way digital forensics are managed.

The specialists at Nuix are working hard to ensure that future demands within the sector are held to a high standard and want to establish more formal ways of partnering with digital forensic leaders throughout the country. The vision for Nuix is to work towards a healthy longer-term partnership to support current and future challenges that will evolve over time.

Because Nuix already support the policing and security sectors globally, specialists and solutions can offer lessons learned around the world to help locally.

Nuix solutions are well placed to address some of the points raised within the Digital Forensics Science Strategy. Working with Nuix cuts operational time, freeing up officers from hours of trawling through evidence, to do what they do best, leaving the specialists to quickly bring the most relevant items to the surface.

Healthy collaboration between digital forensics leaders and vendors is one major factor in the fight against the increase in complexity and sheer volume of crimes where data and devices are used.

Here are some views expressed by Nuix when examining the different areas highlighted in the report:

1. LACK OF SUPPORT SERVICES

There has been an ever-increasing demand for digital forensics capabilities within police forces.

Reactive local strategies were needed to combat the growing number of cases where digital forensics played a pivotal role. High demand and the need to get the job done can result in a lack of the right level of resources, both human and the supporting technology and tools. This is a global challenge and one where Nuix is aligning its research by helping to understand how digital forensics want to work moving forward.

The commitment from Nuix is that we are investing in Research and Development. We are getting closely aligned with specialists who are working tirelessly, processing the huge amount of data and cases on a day-to-day basis as well as the divisional leaders who are responsible for the strategic direction of their constabulary.

Where digital forensic services have previously been operating without a lot of support they have often lacked core tools to help them manage their activity. This is where Nuix can play a key role in backing the Information and Communications Technology (ICT) team, helping to resolve more investigations with sophisticated software.

PAUL SLATER

Starting his career as a Computer Forensic Investigator in the Greater Manchester police, Paul has over 25 years of experience within digital forensics and investigations, having worked in both corporate and government organisations (including the UK's Serious Fraud Office and two of the Big 4 advisories).

Paul works with multinational organisations both in the UK and globally, advising on forensic technology solutions (including electronic disclosure, litigation readiness, data compromise and forensic data analysis) and his experience covers technological, legal and commercial aspects of digital and forensic investigations and discovery.

"Our mission at Nuix is to empower organisations to 'Find Truth in a Digital World" and we support police and security agencies in the UK and globally with solutions that help them meet the challenges as laid out in the NPCC's Digital Forensic Science Strategy."

2. FRAGILE COMMERCIAL MARKETPLACE

Digital forensic services need external suppliers but forensic science funding reductions doesn't always allow their use. This marketplace needs to be maintainable and affordable and Nuix can offer a standardised package across all forces.

3. LIMITED STRATEGIC ENGAGEMENT WITH PARTNERS TO WORK ON LONG TERM SOLUTIONS

The report highlights the need for more strategic relationships with a number of providers that can help with the challenges from a nationwide point of view.

Nuix understands and appreciates that with day-to-day commitments and constant pressure to deliver, there has not always been the time to plan strategically.

This is true from both public servants and also private sector specialists. This is why, in response to the Digital Forensics Science Strategy, Nuix has a dedicated team of specialists to help be proactive with the long-term initiative. Nuix would like to share the experience gained globally to help provide a joined-up approach to current and future threats both nationally and locally.

The Nuix Digital Forensics Task Force wishes to increase quality engagement so that a virtuous circle is formed, where software solutions act as an enabler and specialist's valuable insight and feedback help with the future roadmap of the solution.

One initiative Nuix wishes to encourage is the involvement in forums and special interest groups so that challenges can be identified early and a proactive culture instilled.

4. RECRUITMENT AND RETENTION

Nuix solutions give digital forensic services better tools therefore helping with the issue of recruiting experienced digital forensic examiners. An efficient, easy-to-use system is an added benefit when it comes to retaining staff who may be bored or overwhelmed with the workload.

With long-serving experience in the sector, Nuix relates to the challenge of finding, onboarding, training, developing and retaining talent in a market that is constantly evolving. Therefore, Nuix recognises the need to invest, to build a healthy ecosystem of talent both within the private and public sectors. For the long-term vision highlighted in the Digital Forensic Science Strategy report to prevail, more trust and alignment is needed to help combat the rise in the use of digital elements amongst criminals.

Nuix would support any initiative that helps encourage any potential talent and increase retention within police forces' digital forensics teams nationwide. Better education in the latest developments in software will lead to increased adoption and utilising the tools at hand to aid in the process of digital forensics. Software should be an enabler and decrease pressure on workloads.

Nuix wishes to partner with police forces to help understand this further and would encourage being part of the process moving forward.

5. LACK OF DIGITAL FORENSIC SCIENCE AWARENESS WITHIN POLICING

Police officers handle many different sources of digital evidence but need a basic level of understanding to ensure they properly understand the value of what they are doing. Nuix can help to educate these forces in the form of workshops or training courses.

Nuix also feels that the use of its systems will reduce the transactional elements of a Digital Forensics Specialist enabling them to become more strategic. Vendors like Nuix should not only focus attention on the users of the software solutions but also the divisional heads and nationwide stakeholders to allow better visibility regarding statistics and metrics.

Nuix Digital Forensics Division wishes to be part of any initiative where training and education will help the future health of the sector and ultimately the people they protect.
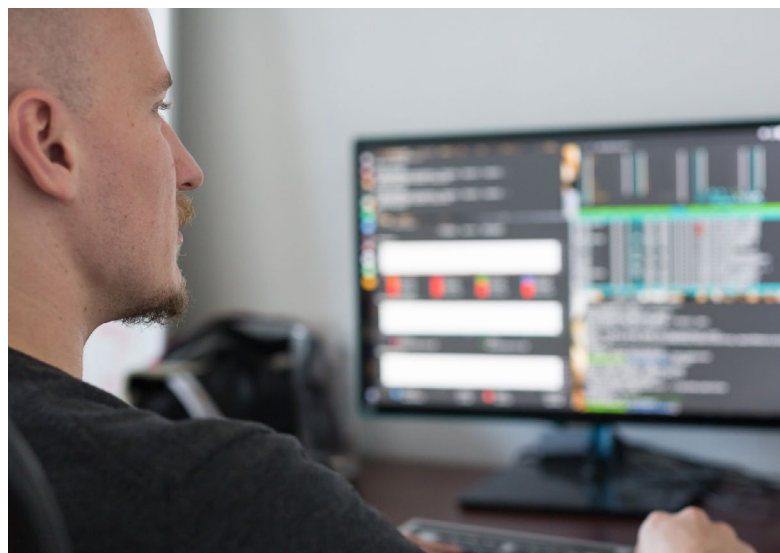
MARK MCCLUSKIE

Mark served as a police officer at different ranks, for over 30 years in Northern Ireland, where in his last 14 years he managed the digital forensic and cyber investigations teams.

He holds a master's degree in Cybercrime Forensics and has sat on various national working groups in the areas of Digital Forensics, Child Protection, Cybercrime and Counter Terrorism.

Mark supports many of Nuix's activities around law enforcement, policing and intelligence, offering first-hand experience to our law enforcement and investigative customers, helping them to deal with the growing struggle of big data in investigations.

6. EMBEDDING QUALITY

In every force cases get thrown out of court on technicalities. This challenge of getting quality data is greater when it comes to digital forensics because of the added complication resulting from the range of digital forensics data types and methods. Many methods of data collection and storage are used including traditional means such as filing paperwork and handwritten notes.

Using Nuix as a tool offers better data processing, storage and evidence collecting.

Nuix solutions are tried and tested and constant investment into the solutions keeps them one step ahead of increases in the use of data, devices and enhanced security from hardware vendors. Quality data monitoring, manipulation and extraction go towards helping to improve the chances of a conviction. Therefore Nuix wishes to educate the sector within different specialisms on the role that effective digital forensics plays on a local and national level.

7. HANDLING LEGACY DATA

For most forces limited integration with force ICT means data is still being recorded manually. Legacy data may be stored in old, or obsolete computer systems and need to be migrated. Nuix specialises in understanding and organising different formats of unstructured data and formatting and interrogating the information so it can be used to maximum effect.

"This is, without doubt, more robust, more efficient and more cost-effective than anything ever used previously and is definitely the way forward."

Senior Investigator, Police Scotland

TURN DATA CHAOS INTO INTELLIGENCE

The Nuix Engine transforms massive amounts of disordered data - from emails, social media, communications, and other human-generated content – into actionable intelligence.

Over 90% of all crime has a data element. Large data volumes and the variety and complexity of digital evidence sources are making it difficult for investigators to make informed decisions. They find themselves sifting through mountains of evidence and working their way through massive backlogs.

Nuix's advanced digital forensics technology empowers investigators to triage, collect, process, analyse, and review terabytes of data per day.

Nuix solutions quickly extract, correlate, and contextualise thousands of data types, across people, objects, locations, and events, enabling teams of investigators to make faster and more accurate decisions collaboratively - wherever they are. Nuix can handle the burden of data filtering and sorting, so you can get back to what you do best: solving cases.

NUIX AS A TOOL TO ELIMINATE QUEUES

Thousands of digital devices are being held by police nationally, and globally, waiting to be analysed. Digital forensics are under constantly increasing pressure as almost every crime leaves a digital footprint.

These delays and backlogs impact victims, witnesses and suspects waiting for the outcome of investigations including innocent people waiting for the return of their devices. These hold-ups can delay bringing a criminal to justice.

The wide spectrum and volume of sources of investigable information require great lab throughput and diverse skillsets to effectively manage demand.

Using Nuix systems, investigators can directly access digital evidence, search, review, report and collaborate from their desk. This simple and easy solution speeds up case turnaround time and empowers people to do their job without spending time sorting through data.

One particular forensic team achieved over a five-fold increase in time-savings from extraction to reporting whilst others are reporting little or no backlogs of cases.

"How we used to do digital forensics, is no longer fit for purpose in a world where data volume and complexity have ballooned, and a substantial subset of the data required is in the cloud. Throwing massive volumes of extracted data to investigators, who generally lack the tools and methods to interrogate the data effectively, just shifts a problem; a more integrated approach could be transformative."

Gill Tully, Forensic Science Regulator

2019 ANNUAL REPORT, 25 FEBRUARY 2020

HOW CAN NUIX HELP A NATIONAL PROBLEM?

The recently established Forensic Capability Network (FCN) is key to improving operations, providing central support services on a national basis. It has been designed to enable policing to work collectively to deliver high quality forensic science capabilities, to share knowledge and learning, and to improve resilience, efficiency, quality and effectiveness.

Nuix wants to work towards a closer relationship with force ICT. This will start to open up technologies that can span networks and deliver joined-up results and outcomes back to officers.

"Nuix has the ability to dramatically improve digital forensic capabilities in comparison to existing processes, subsequently reducing backlogs and enhancing service delivery."

Senior Investigator, Police Scotland

POLICE SCOTLAND CITES NUIX SOFTWARE AS 'THE WAY FORWARD'

Nuix has been the tool of choice for Police Scotland after it evaluated its digital forensic technologies and processes against a workflow using Nuix Workstation and Nuix Investigate® in a series of drug supply cases and a multi-agency fraud case.

The Nuix workflow significantly reduced the time it took officers to complete forensic analysis, increased the average number of cases completed per analyst and allowed investigators to complete a case in months that would have taken years using the old methods.

Over a period of six months Police Scotland found the Nuix workflow:

- Halved the overall time it took officers to complete a forensic analysis, with digital forensic processing time reduced by 60% and report preparation time reduced by 76%

- Increased the average number of cases completed per analyst by 75% and the average number of devices processed per analyst by 80%

- Allowed investigators to complete a case in months that would have taken years using the old methods.

Feedback obtained from a senior investigator in the Joint Investigation Team:

"This type of work would normally be done manually by several members of staff in our department with the digital/electronic devices being sent to our digital forensic officers who are not full time in this area and therefore would take several months even to allocate, followed by months of them loading the devices onto systems before coming back to investigators to then sift through hours of calls/data, taking months, and in an investigation the size of this operation, potentially years.

"Thanks to the use of Nuix, the dataset has been reduced to a level which allows us to pinpoint patterns of activity and direct communications between our Organised Crime Group (OCG) suspects with further lines of enquiry being identified. It has allowed us to uncover substantial electronic evidence supporting our case.

"This is, without doubt, more robust, more efficient and more cost-effective than anything ever used previously and is definitely the way forward..."

READ FULL CASE STUDY

A team of just two digital forensic analysts were able to complete the many drugs supply investigations using Nuix software, compared to 13 who used Police Scotland's existing tools and workflows.

NUIX SUPPORTS NATIONAL CRIME AGENCY'S DIGITAL FORENSICS LAB

The UK's National Crime Agency (NCA) needed to source technology that could keep pace with its workload of disrupting serious and organised crime and bringing criminals to justice.

The National Cyber Crime Unit's (NCCU) traditional digital forensic workflows were struggling with the volume and variety of evidence, leading to processing and reviewing queues.

"We needed a sophisticated and scalable solution that could help our investigative teams nationwide and internationally investigate cases more efficiently, by helping them to prioritize evidence, collaborate, and find the key evidence threads faster," said a digital forensics team leader at NCCU.

"We tested the leading forensic tools on the market for one that could process multiple devices concurrently, handle our growing data sets, and search across all seized media. Nuix was the one that came out on top."

FASTER AND SMARTER INVESTIGATIONS

The NCCU's digital forensic investigators use Nuix to process data sets of any size from a large variety of digital devices.

Nuix also enables the team to extract and collaborate on evidence items from cases processed by regional organized crime units.

Nuix automatically extracts the content and metadata of evidence sources, removes duplicate and irrelevant information, and brings the most essential data to the surface to help investigators understand the facts of the case much quicker.

Nuix automatically identifies and visualises communication links between suspects. It extracts intelligence items such as payment card numbers, email addresses, sums of money, IP addresses, and other entities that follow a predictable pattern.

It can automatically highlight and group together similar images, such as pictures showing guns, drugs, or even faces.

"Our forensic investigators can now filter an entire operation consisting of multiple devices based upon a number of factors such as metadata, entities, or timeframes," said the forensics team leader.

"They can then use Nuix's network diagrams to see who is emailing credit card numbers to whom.

"Within hours of processing, we can deliver this data to the team investigating the case, regardless of where they are located, in a format they can easily review."

"We tested the leading forensic tools on the market for one that could process multiple devices concurrently, handle our growing data sets, and search across all seized media. Nuix was the one that came out on top."

National Cyber Crime Unit

THE IMPACT OF COVID-19 ON POLICE FORENSICS

At the beginning of 2020 there was always a wait for forensics to come back - but fast-forward a year and COVID-19 is making queues even longer.

Pre-COVID, investigators would travel to look through evidence in other locations – something that's been much more difficult during lockdown restrictions.

Forced to work from behind a desk, Nuix was a godsend to investigating officers wanting to see their evidence results and work their cases before the end of lockdown. Time not spent out of the office is time saved, helping the bad people to be put away quicker.

To read the full Digital Forensic Science Strategy report **click here**

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nuix

Nuix (www.nuix.com) creates innovative software that empowers organisations to simply and quickly find the truth from any data in a digital world. We are a passionate and talented team, delighting our customers with software that transforms data into actionable intelligence and helps them overcome the challenges of litigation, investigation, governance, risk and compliance.

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