BlackBerry AtHoc

White Paper

Crisis communication in crisis.

Meeting the challenges of a complex threat environment.

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Introduction: The Emerging Threat Environment

To paraphrase the traditional Chinese curse, we're living in interesting times. Between 1980 and 2010, the number of recorded natural disasters doubled from roughly 200 to 400 per year, [1] averaging 380 annually this past decade.[2] Since 2000, natural disasters have racked up global economic losses of nearly $1.4 trillion and disrupted the lives of some 1.7 billion people across the globe.[3]

Then COVID-19 arrived, with a brutal impact to the world order that won't be fully understood for years to come. Almost immediately, the global supply chain collapsed as the contagion spread rapidly from one country to the next. Healthcare systems were quickly overwhelmed as frontline workers, many of whom lacked adequate personal protective equipment, struggled heroically to keep pace with the surge of infected patients flooding emergency rooms and filling hospital beds. Political divisions, already inflamed, sparked violent confrontations between those who supported mandates by government and medical authorities to contain the pandemic and groups that viewed those efforts as an intolerable infringement on their personal liberties.

In response to the chaos, organizations of all kinds shut their doors. Many laid off or furloughed employees. Others attempted to continue operating by allowing employees to work from home. When the lockdowns began in March 2020, the number of remote workers surged from 9% to 77% in a matter of weeks,[4] a transition more than half the firms surveyed by Iometrics and Global Workplace Analytics[5] acknowledge they were unprepared to make. Recognizing an opportunity to exploit the crisis, cybercriminals quickly launched a massive phishing campaign targeting consumers and remote workers. Between the second and third weeks of March 2020, phishing attacks spiked by an unprecedented 436% and breaches increased by 175% over the year before.[6]

These events—and the trends they represent—signal the emergence of a new kind of threat environment. The implications for business owners and crisis and incident response professionals are likely to be profound and long-lasting:

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1 Geomatics, Natural Hazards and Risk
2 Annual number of natural disaster events globally from 2000 to 2019
3 Disaster losses top one trillion dollars as donors underfund risk reduction
4 Global Work-From-Home Experience Survey
5 Global Work-From-Home Experience Survey
6 Abnormal Security Quarterly BEC Report for Q1 2020

- It will become increasingly difficult for response teams to anticipate how their plans and processes will be affected by external factors or to approach critical events as discrete, isolated incidents. Organizations will need to manage natural disasters and other critical events against a backdrop of long-term threats to world stability that include current and future pandemics, cyber-attacks, political divisions and economic and social disruptions.
- There will be complex and often unpredictable interactions between critical events that overlap, impact each other, and play out over different time frames. Each situation will present unique challenges. Consequently, organizations will need emergency mass notification systems (EMNS) and critical event management (CEM) solutions that are flexible enough to deal with fluid conditions on the ground while providing the consistency and range of capabilities needed to address the full spectrum of event scenarios.
- Cloud computing, the mobility revolution, and the COVID-19 pandemic have accelerated the transition to a mobile and decentralized workforce. Therefore, any EMNS and CEM solution must enable seamless communications between mobile and geographically dispersed employees, team members, mutual aid agencies and government colleagues, and the public at large.
- The solution architecture should be capable of readily integrating new kinds of devices and communication media while providing a unified dashboard for monitoring the full spectrum of EMNS and CEM functions in real time. These include:
    - Alerting hundreds of thousands of employees using their preferred form of communications and devices.
    - Gaining real-time situational awareness by empowering field personnel to report events via rich, geotagged media reports.
    - Meeting duty of care commitments by monitoring and reporting on the status, safety and wellness of employees and response team members.
    - Enabling secure communication with partners, by creating a permission based network to include external organizations for a more effective collaboration and response to incidents.

In this white paper, we'll consider how BlackBerry clients are meeting these requirements with the BlackBerry® AtHoc®, AtHoc® Alert, AtHoc® Collect, AtHoc® Account, AtHoc® Connect and AtHoc® Situation Response solutions, respectively.

Note: The following use case descriptions are re-purposed, edited and consolidated versions of BlackBerry-published AtHoc case studies, which are cited and linked for reference.

Delivering Emergency Notifications with AtHoc Alert

Emergency notification systems that rely only on robocalls, speakers, sirens and email and text messages are no longer adequate to deal with today's crisis realities. BlackBerry® AtHoc® Alert enables emergency managers to effortlessly establish two-way communications with enterprise and community stakeholders using their preferred devices and communications media.

"We have a large-scale operation that requires a robust solution that can easily communicate across multiple channels with multiple people, and BlackBerry provides that."

- John Durbridge, Campus Security Manager, Macquarie University.

Use Case: Macquarie University

Macquarie University is a public research institution located nine miles northwest of the central business district in Sydney, Australia. The sprawling campus, effectively the size of a small city, hosts more than 45,000 students and 5,000 staff members, as well as numerous businesses and visitors from the surrounding communities. An educational and cultural magnet, the university boasts extensive research facilities, a sports and aquatic center, museums and art galleries, an observatory, and a private teaching hospital.

The administration is keenly aware of potential risks to the university's people and infrastructure, which include flooding, fires, extreme weather, cyber-attacks and human threats. "The safety of staff and students is of the utmost importance," says Grant Sayer, Director of Infrastructure and Applications, Macquarie University Central IT Group. "Because we've got people coming and going on campus, we need to be able to reach them anywhere and at any time. We can't know what devices they're carrying, so we also need to send emergency alerts through multiple channels."

Doing so would have been impossible in the past, when alerts were primarily sent via email and radio devices. University administrators knew they could no longer rely on single-channel alerts or expect staff and students to carry a secondary device exclusively for receiving crisis notifications. Instead, they would need a communications platform capable of sending alerts to a wide variety of student and staff devices as well as communications systems managed by emergency services organizations and other external stakeholders. The new platform would also have to provide the end-to-end security needed to demonstrate compliance with the European Union's General Data Protection Regulation (GDPR) and Australia's Notification of Data Breach Policy. After a thorough evaluation, the university invested in a multimodal cloud deployment of BlackBerry AtHoc.

Today, the university can send alerts to students and faculty on their personal devices via text, voice, email and the AtHoc mobile app, as well as Twitter, Facebook, and other social media. The university's security control center staff can also reach out instantly to first responders and cascade emergency alerts to the necessary government agencies.

"BlackBerry AtHoc allows us to comprehensively meet the communication requirements of our crisis incident management plan," says John Durbridge, Campus Security Manager. "To be able to communicate quickly, effectively, and in real time is absolutely critical in an emergency. We have a large-scale operation that requires a robust solution that can easily communicate across multiple channels with multiple people, and BlackBerry provides that."

Click here to read the complete Macquarie University case study.

Maintaining Situational Awareness with AtHoc Collect

In times of crisis, situational awareness is essential for streamlining response and recovery efforts. BlackBerry® AtHoc® Collect empowers field personnel to be the eyes and ears of the operations center by submitting real-time updates and geotagged multimedia status reports secured by end-to-end encryption.

"In a disaster, our biggest enemy is time."

- Crisis Alert Adminstrative Director, Major Urban Center.

Use Case: Major Urban Center

With nearly two million residents, this major urban center is not only the capital's most populous borough, but also one of the nation's largest, most densely populated cities. Unfortunately, the borough, is situated in a region subject to periodic natural disasters, including earthquakes, floods, and volcanic eruptions. Consequently, municipal officials have invested heavily in the development of an early warning system that uses a network of sensors, loudspeakers and public broadcasts to alert residents about natural disasters and other emergencies.

Despite this early warning system, the borough's response to critical events was often disorganized and inefficient. According to the borough's Crisis Alert Administrative Director, "In a disaster, our biggest enemy is time. Although first responders and command center personnel had advance warning of impending crises, they still had to deal with frequent delays when gathering information and assessing emergency situations."

To ameliorate these issues, the borough retained a BlackBerry partner to integrate BlackBerry AtHoc with the city's early warning system. The 120 users would include the mayor, the civil protection director, general managers responsible for financial resources and reconstruction efforts, and officials responsible for coordinating first responders.

The timing was fortuitous. Not long afterward, the city experienced a major earthquake. As alarms throughout the borough began sounding, AtHoc Alert sent out internal notifications via email and SMS. Another notification went out to the Command Center, and a third went to police, firefighters and other emergency personnel. Thanks to BlackBerry AtHoc, incident response teams were already on the ground when the first tremors struck, using AtHoc Collect to provide Command Center staff with up-to-the-minute photos, videos, and text reports indicating which areas of the borough needed immediate attention.

During the subsequent recovery and rebuilding period, borough officials used AtHoc Collect to coordinate relief efforts and prepare detailed damage estimates, thereby accelerating the process of relocating victims and providing financial aid. "After the earthquake, the borough's population received relief funds almost immediately," says a BlackBerry Channel Account Manager. "Other districts are still waiting for reimbursement to this day. This has, understandably, gone a long way toward increasing the populace's faith in their government."

Click here to read the complete Major Urban Center case study.

Meeting Duty of Care Commitments with AtHoc Account

It's a well-worn cliché that people are an organization's greatest asset. Yet, all too often, organizations lack a formal process for monitoring the status of their personnel during and after an emergency event. AtHoc Account helps reduce pre- and post-emergency chaos by providing the tools organizations need to account for their employees efficiently, reliably and systematically.

Use Case: Greater Manchester Police

As one of the largest police forces in the United Kingdom, the Greater Manchester Police (GMP) safeguards one of the country's most diverse regions. When the COVID-19 pandemic struck, the majority of the force's support staff suddenly found themselves working remotely. The resulting health risks and operational disruptions were a source of considerable stress for all GMP employees. "We needed something to help us keep connected with our staff, especially for the purpose of wellness checks," says Darren Spurgeon, GMP Business Change Manager, Mobile Technology. "All branch leads across the force wanted to have an understanding of how personnel were feeling on a day-to-day basis and to see if any staff were showing signs of COVID-19."

GMP's wellness team used AtHoc Account to send text and email messages to employees asking how the pandemic was affecting them. The alert included four predefined response options, ranging from "Very Little" to "Significantly and I would like to speak to someone." This approach allowed the force to focus its efforts on those who needed help the most.

"The alerts were sent to all officers and staff," says Inspector Spurgeon. "For those who needed advice on how to cope, we provided them with a few resources and the opportunity to follow up with our wellness team. For those who needed immediate help, our wellness team reached out directly to coordinate. We wanted our personnel to know that we were listening to them and that we cared about their health. It's something I see a lot of frontline organizations struggle with. We also wanted to ensure that if anyone showed symptoms of COVID, we could get them the medical care they required."

Spurgeon had originally intended to use AtHoc exclusively for internal communications to coordinate responses to major incidents. "The fact that it's proved so invaluable in helping us ensure the safety and well-being of our people during the coronavirus pandemic is immensely beneficial," he says now. "It's allowed us to not only direct our efforts where they'll do the most good, but to help our personnel cope with what has been an extremely challenging time for both GMP and the communities of Greater Manchester."

Click here to read the complete Greater Manchester Police case study.

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- Darren Spurgeon, GMP Business Change Manager, Mobile Technology. Greater Manchester Police

Enabling Secure, Interoperable Crisis Communications with AtHoc Connect

Mounting an effective, coordinated response to a crisis often requires seamless communications between diverse and geographically dispersed teams of internal and external stakeholders. AtHoc® Connect provides the real-time, interoperable communications organizations need to collaborate effectively with government, commercial, and essential service provider partners.

"AtHoc solves the communications challenges in our unique environment by allowing us to connect with external parties and enables us to communicate simultaneously in many different ways that will be most impactful."

- Colin Rizzo, Emergency Manager, Port of Houston Authority

Use Case: Port of Houston Authority

Houston has the distinction of being one of the most ethnically diverse cities in the United States[7] and an economic powerhouse for international trade. According to Colin Rizzo, Emergency Manager for the Port of Houston Authority (POHA), "We have been number one in U.S.-foreign trade by tonnage for the last 19 years. We are the twelfth-largest port in the world. We are second in U.S.-foreign trade by cargo value. And we are the second-largest petrochemical complex in the world."

The POHA is responsible for ensuring the operational safety of the petrochemical, container, bulk cargo and industrial operations in the 20-mile area of accountability that extends deep into Houston, the fifth-largest metropolitan area in the United States. This responsibility extends to protecting the millions of people who surround the Authority's facilities and the waterways it patrols.

The region is subject to both hurricanes and flooding. In an emergency, ships and vessels may be directed to a safe-harbor location or evacuated through the shipping channel. This process can require the movement of hundreds of watercraft as well as thousands of trucks and other vehicles that pass through the Authority's facilities each day.

The high concentration of petrochemical and industrial facilities throughout the shipping channel creates another set of potential disasters. Ships can sink or leak, contaminating the waterfront. Fires and explosions can create toxic clouds over densely populated areas.

Crisis communications at this scale requires complex planning and coordination among multiple local, city and federal authorities. However, prior to implementing BlackBerry AtHoc, the Authority lacked an efficient and timely way to establish emergency communications with its diverse stakeholder community.

Today, these issues have been largely resolved. AtHoc Connect is now facilitating seamless two-way communications between the Authority and federal agencies such as the U.S. Coast Guard, state agencies such as the Texas Department of Emergency Management, industrial agencies such as the Houston Pilot Commission, and both city and county first responders.

According to Rizzo, "AtHoc solves the communications challenges in our unique environment by allowing us to connect with external parties and enables us to communicate simultaneously in many different ways that will be most impactful."

Click here to read the complete Port of Houston Authority case study.

7 Tracking Houston Perceptions in Remarkable Times

Incident Management Lifecycle with AtHoc Situation Response

Although essential, a robust EMNS and CEM infrastructure alone cannot guarantee an effective and timely response to a crisis. Organizations must develop, test, validate, and exercise detailed incident plans that are then executed flawlessly by response teams contending with extreme stress and chaotic, rapidly changing conditions on the ground. To paraphrase Benjamin Franklin, if an organization fails to prepare, it is preparing to fail.[8]

BlackBerry® AtHoc® Situation Response is a critical event management tool that enables organizations to manage the complete incident response lifecycle from initial planning to post-event auditing, analysis, and archiving.

Streamlining the Planning Process

Organizations can leverage AtHoc Situation Response to create plans with detailed, step-by-step procedures for ameliorating threats of all kinds. Plans can address common concerns or be industry-specific. For example, the Port of Houston Authority has plans for incidents in which a ship carrying petroleum products leaks and contaminates the waterfront. Other organizations, such as Macquarie University, have no need to plan for an environmental catastrophe of this magnitude. However, both Macquarie University and the Port of Houston Authority must plan for extreme weather, cyber-attacks and other common threat scenarios.

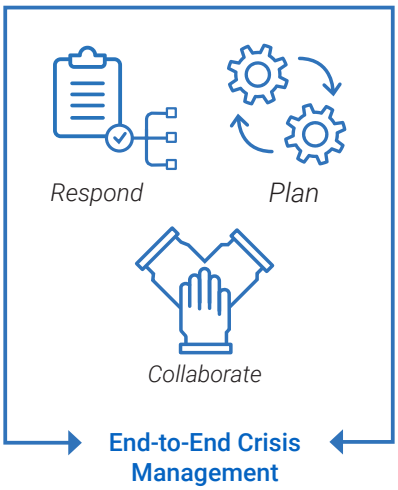
AtHoc Situation Response helps organizations streamline the planning process by incorporating AtHoc Alert templates for weather warnings, physical security breaches, and other emergency notification scenarios. Plans can also include templates for AtHoc Account events like those used by the Greater Manchester Police for wellness checks. Organizations can easily customize all messages and response options to meet the needs of specific groups of internal and external stakeholders.

In consultation with AtHoc deployment experts, for example, the Office of Response at the Mississippi Emergency Management Agency (MEMA) created 64 alert templates for threats ranging from minor weather events to emergencies at the state's Grand Gulf Nuclear Station. MEMA has already used these templates during emergency response drills. According to Thomas Brewer, MEMA GIS Technology Officer, "Having prepopulated templates definitely made the drill move more quickly as did the ability to contact people through avenues other than email and text.[9]"

Click here to read the complete Mississippi Emergency Management Agency case study.

From Plan to Action

A sudden power outage shuts down your business. Are you prepared to manage what's next? With AtHoc Situation Response, you can activate a predefined plan and initiate the following (hypothetical) actions.



- Order facility management to lock all doors.
- Let [x] know that we've switched to backup power.
- Tell employees at home or traveling not to come to the office.

8 Forbes Quotes Thoughts On The Business Of Life

9 How BlackBerry AtHoc Provides Mississippi Emergency Management Agency their Cornerstone for Critical Information Notifications

Responding with Agility to Changes on the Ground

Real-life incidents don't follow playbooks, so organizations must be able to change plans and establish new communication chains on the fly. They must also be able to activate and manage plans for critical events that arise while incidents are already underway. AtHoc Situation Response supports both options, allowing emergency operations staff to activate plans and templates instantly to address the full spectrum of discrete and overlapping response scenarios.

A Vision for the Future

In this white paper, we've described a variety of representative EMNS and CEM scenarios and cited examples of how BlackBerry AtHoc enables clients to optimize their incident response capabilities while contending with an expanding and increasingly complex threat environment. Click here for recent examples.

Our approach to critical event management is grounded in the belief that every organization has a moral imperative to learn from previous disruptive events and plan accordingly. However, we also recognize the futility of believing it's possible to anticipate every challenge organizations will face in the years to come. No one could have predicted in 2019 how a "pneumonia of unknown etiology"[10] in Wuhan, China, would lead to a pandemic that has decimated the global economy and taken more than a million lives. Nor could anyone have anticipated how the pandemic would subsequently complicate efforts in California to fight wildfires[11] or spawn a massive global surge in all forms of cyber-attacks.[12]

Organizations can, however, adopt an approach to EMNS and CEM that is robust, flexible and capable of managing every kind of critical event in a timely, efficient and responsible manner. It is this insight that guides our ongoing efforts to refine and extend the capabilities of the BlackBerry AtHoc platform.

To recover and emerge stronger from the current crisis, organizations will also need new approaches for balancing the risks and opportunities created by the mobile revolution, cloud computing, smart vehicles and IoT devices as well as new technologies, such as artificial intelligence, to fuel their business transformation projects. It is these long-term strategic requirements we are addressing with the BlackBerry Spark® Suite. You will find numerous examples here demonstrating how BlackBerry clients are using these solutions to increase their resilience, enhance their agility and realize our shared goal of a future that is safe, secure and productive for all.

10 World Health Organization Pneumonia of unknown cause
11 COVID-19 complicates California's record-setting wildfire season
12 Roundup: COVID-19 pandemic delivers extraordinary array of cybersecurity challenges

Secure and Certified

AtHoc is among the most secure EMNS and CEM solution on the market today, certified for use by the Department of Defense (DoD), the Department of Homeland Security (DHS) and the National Institute of Standards and Technology (NIST).

AtHoc Global Cloud Services have successfully completed the rigorous security and risk management review required to earn ISO 27001 certification as a SaaS service under BlackBerry Corporate ISO 27001 certification. In addition, AtHoc:

- Has been awarded the Support Anti-Terrorism by Fostering Effective Technology (SAFETY) Act Designation by DHS.
- Has been recognized as a Qualified Anti-Terrorism Technology (QATT). BlackBerry is the only supplier of crisis communication technology to receive the SAFETY Act Designation.
- Complies with Federal Information Assurance regulations, including NIST SP 800-37/53 Rev3 and DoD DIACAP.
- Is hosted in highly reliable, SSAE-16 SOC I Type II and LEED Certified Data Centers in the United States and Canada. BlackBerry also maintains data centers in the U.K., The Netherlands and France to comply with E.U. data residency requirements specified in the General Data Protection Regulation (GDPR).

About BlackBerry

BlackBerry (NYSE: BB; TSX: BB) provides intelligent security software and services to enterprises and governments around the world. The company secures more than 500M endpoints including 175M cars on the road today. Based in Waterloo, Ontario, the company leverages AI and machine learning to deliver innovative solutions in the areas of cybersecurity, safety and data privacy solutions, and is a leader in the areas of endpoint security management, encryption, and embedded systems. BlackBerry's vision is clear — to secure a connected future you can trust.
For more information, visit BlackBerry.com and follow @BlackBerryAtHoc.

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