Stadium Security and Safety in Real-Time Through Data Integration

LIVE EARTH

Executive and operational staff overseeing large stadiums have to monitor, assess and respond to a multitude of situations in order to enhance the game-day experience for fans. Managing sporting events like football, baseball and soccer games present special challenges. Severe weather, mass transit delays, traffic in and around the venue and even unauthorized drones significantly impact the event experience. Additionally, handling large crowds and rapidly shifting excitement levels poses its own challenges, such as accidents, damage to property or even medical emergencies. Stadiums, highly concerned with visitor safety, take all these facets into consideration to ensure a great experience for guests.

With recent advancements in technology, the number of available data streams capable of monitoring and managing stadiums continues to grow. Executive staff and operations teams alike must now consider adding a real-time alerting platform that meets the unique needs of their stadiums and entertainment venues.

Converging multiple data feeds seamlessly into one monitoring platform speeds up response times and optimizes security efforts. Consolidated alert-driven systems are invaluable when tens of thousands of people rely on the stadium's operations staff to keep them safe while enjoying the game.

When game day arrives and crowds pour into a stadium, security and operations teams are challenged to enhance the experience by monitoring and analyzing massive amounts of data.

When incidents occur, stadium command centers are often left scrambling to respond with limited resources. Most command centers are equipped with countless screens, all displaying different data feeds. Stadium security, crowd flow and fan safety, event parking, vehicle traffic and sudden changes in weather are legitimate concerns with varying priority for stadium executives and staff.

These separated systems create a logistical nightmare, where operations managers and their teams face the challenge of discerning the most important issue and responding to it in a timely manner. With so many disparate feeds showing relevant data, event staff is challenged with knowing what to focus their attention on so informed decisions can be made quickly and accurately.

Inbound and outbound traffic congestion.

Game day traffic in and around stadiums is notoriously challenging to manage. Currently, most stadiums have security teams monitoring roadways, parking garages for capacity, bus routes and license plate readers (LPRs) on multiple screens. This multiple-monitor system increases the chances of missing critical opportunities to reduce congestion, which puts a strain on stadium staff, who must resolve the issue quickly.

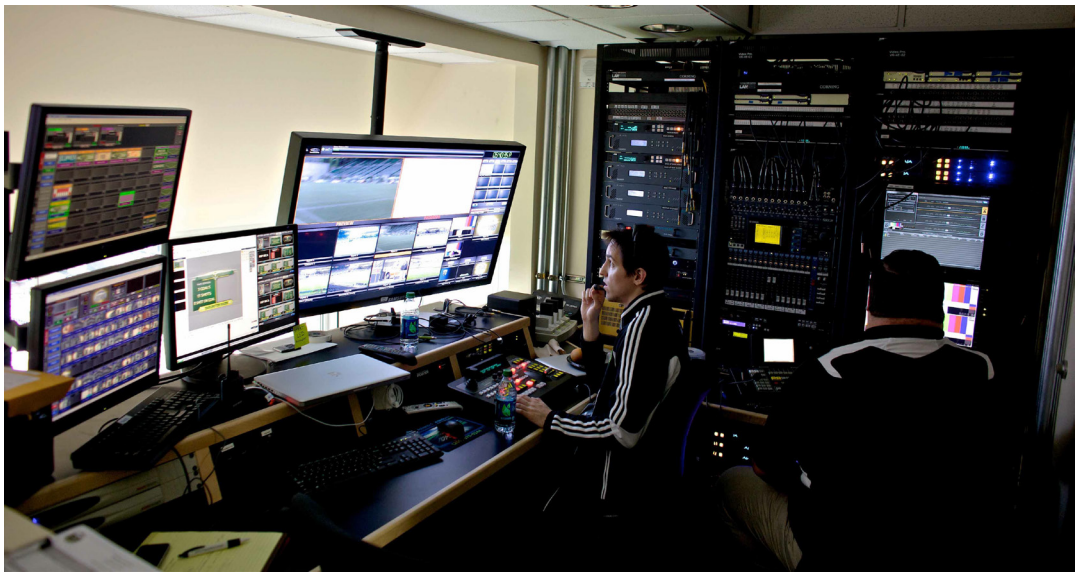
Operations teams need more reliable ways to monitor traffic and communicate with staff members charged with directing vehicle and pedestrian traffic to less congested areas. This is particularly critical in emergency situations, where operations managers need to ensure a smooth and safe exit for their attendees.

Increased threats in and around the stadium.

Fan safety is a constant concern for stadiums across the country. Venue executives are adopting the latest security tools to prevent threats and mitigate risks[1] [2]. Along with technological security measures, stadiums deploy dispatch to monitor event grounds and respond to incidents as needed.

However, a packed stadium means there are countless situations that need the attention of dispatch, but prioritizing the issues and relaying the exact location of the problem comes with its own set of difficulties. In the midst of handling medical needs, dispatch is constantly monitoring for unattended packages and entry points blocked by bikes, cars or even clusters of people.

Event staff face the challenge of keeping patrons safe against threats inside and outside of the stadium. Necessary security measures like metal detectors and bag checks can cause long lines of vulnerably clustered attendees while merchandise and tailgate areas are hotspots for large crowds. Operators must constantly monitor susceptible spots like these and communicate with dispatch to handle problems as needed. From the moment fans arrive until the last employee has left, security must maintain constant vigilance.



The rise of drones.

Today, more than one million unmanned aerial vehicles (UAVs) are active in the U.S. By 2020, the Federal Aviation Administration predicts there will be more than three million hovering over U.S. neighborhoods, highways and even sporting events[3]. UAVs pose a unique threat to open-air stadiums that must protect against unauthorized video recordings or unwarranted leaflet drops.

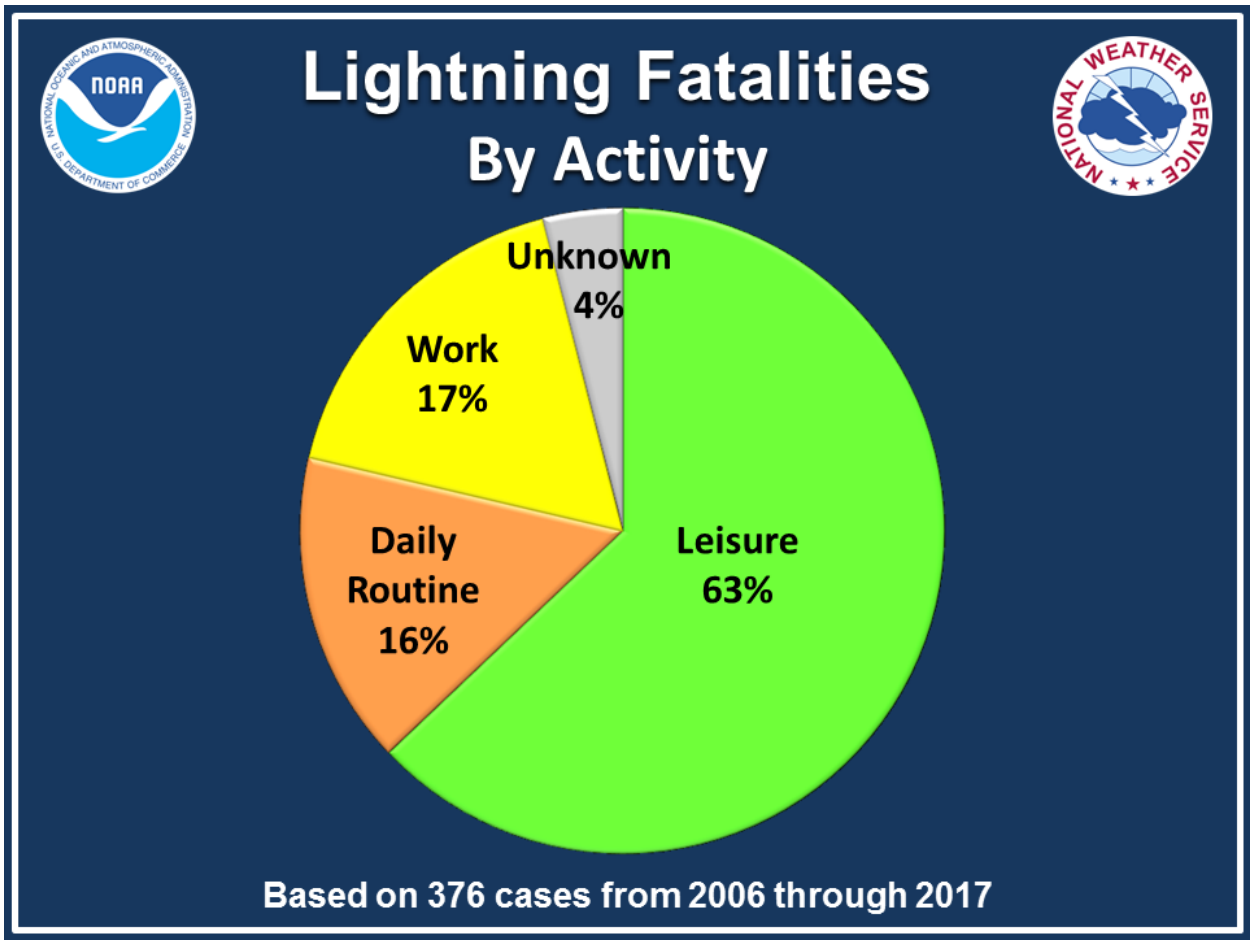
Drone detection systems have been adopted by some Major League Baseball (MLB) stadiums to counteract the increasing threat. While newer systems are capable of tracing drone signals to the source, alerts are not integrated into security measures and this adoption adds another system to monitor. Alerts can notify executives about the proximity of drones to the stadium, allowing stadium officials to take immediate action.

When lightning strikes.

Though weather forecasts may predict severe weather a few days in advance, the high degree of variability means the risk of foul weather may not be known until the day of an actual event. Teams are constantly monitoring satellite and radar footage to determine the potential for lightning and precipitation. Rain causes slick ground, leading to wet walkways where accidental injuries can occur. Heavy storms also bring the threat of flooding, which can cause serious traffic jams or accidents on the road.

The most serious weather-related issue for open-air stadiums is lightning. While teams are allowed to play in sleet, snow and rain, current rules require game stoppage for strikes occurring in a 10-mile radius of the stadium. Lightning can strike as far as 25 miles from the storm that produces it, making it difficult to know when and where a strike will occur, if at all. Over the last decade, the National Oceanic and Atmospheric Administration reported 376 from lightning strikes in the U.S. Sixty-three percent of these fatalities are related to leisure activities[4].

Tracking weather is an unpredictable process, and fan and team safety is reliant on the correct call being made. Stopping a game due to lightning or adverse weather unnecessarily can result in upset fans and lower game-day concessions sales. Knowing the exact time, place and proximity of a strike reduces uncertainty and ensures operations managers make the right call every time.



Support stadium safety with critical data integrated on Live Earth.

Fortunately, event operations and security staff can access a wealth of critical information that will help them prepare for games and large events—all in one place. With the capability to ingest and render over 6,000,000 events per hour in real-time, Live Earth is the world's fastest map. The extensible platform makes it easy for any system to be integrated, eliminating the issue of disparate, siloed feeds. Executives and their teams can consider all relevant data and reduce the possibility of missing a critical moment.

Live Earth's configurable alerting feature generates alerts based off any combination of data feeds and can be customized to notify event staff about any situation. Notifications can be sent by text, email or in-platform, making it easy for staff to move about the venue while still being privy to pertinent issues. The consolidated view combined with real-time alerting helps managers monitor and manage traffic, weather and additional threats from a single screen.

Stadiums like Citi Field have incorporated the Live Earth platform into their day-to-day operations. Photo courtesy of Steve Lasky.

Monitor traffic and transit with Live Earth.

Operators adopting a consolidated view of their current systems can be more proactive in resolving issues before they spiral out of control. While teams may monitor for different problems, the ability to go to the same view on Live Earth helps them communicate effectively with one another and gives insight into the best solution. Live Earth provides access to data feeds, such as traffic flow and incidents, traffic cameras, buses and parking garages. These live layers can be viewed alongside existing systems for a combined view that adds rich and valuable context to every situation.

For example, New York's Citi Field integrates and visualizes their security cameras, door access points, internal and external facial recognition and drone detection systems on Live Earth alongside weather and traffic. By seeing their integrations in a consolidated view, Citi Field operators are able to share information with relevant staff and quickly deploy resources to necessary areas.

"We are in New York so we have a lot of security," said Sara Bollock, Director of Ballpark Operations at Citi Field. "You don't have the option to scale back. Live Earth is a new security technology option that brings plenty of new capabilities to our team."

Live Earth can configure alerts based on any integration. Operations teams can be instantly notified about changes in traffic or parking, such as when a garage nears capacity or when traffic flow drops below 10 miles per hour. Tracking and being alerted to these components in real-time can help staff accommodate sudden changes or respond to serious problems as soon as they happen.

Rapidly communicate critical information.

Live Earth provides an array of fast options for stadium operations teams to communicate on-screen information to their teams. Users can publish screenshots, create live links or record their screen directly in the platform. Additionally, users can send and receive important information as needed in real-time through Live Earth's integration with radio communication systems, WebEx, online team platform or eblasts.

Screenshots capture the information visible on the screen and save a high-quality image. Live links allow the user to set the parameters of visible live layers, and date and time—by sending the link they can instantly share the data they want demonstrated to their team. Screen recordings capture all movement and information visible on the screen, making it ideal to record scenes for review or training purposes.

These publishing and communication options enable teams to relay important information to other security personnel or relevant stakeholders. Stadiums can save time and money by making the appropriate adjustments to daily operations.

Weather alerts for faster response.

Satellite and radar weather feeds give actionable insight into oncoming weather, giving stadium staff the ability to closely monit for shifts that could directly impact the event. Live Earth can set alerts based on weather and send notifications about pertinent changes. In the case of lightning, stadium staff can receive configured alerts that indicate the proximity of the strike, ensuring an appropriate call to stop a game is made every time.

A visual data platform showing conditions such as traffic, weather, and transit surrounding Citi Field. Screenshot from Live Earth Platform.

Comprehensive, real-time visibility of your entire stadium or venue.

When an incident occurs, security operators can turn to Live Earth's platform for comprehensive, real-time context and visibility of any situation. With Live Earth, stadium management can improve response times, better allocate staff resources and even reduce the chance of human errors.

The automated alert and communication system gives stadium executives greater confidence when making important decisions impacting the safety and security of fans. There's no longer a compelling business reason to cling to the siloed approach to managing venues. With all your data available in a single place, you can assess threats, acknowledge alerts and visualize all systems in context without missing critical moments that could get lost in the natural chaos of events. Whether the situation is major or minor, visualizing all of your available data in a single place can help directors relay critical information to relevant stakeholders in a few simple steps, ensuring a swift resolution.

In stadium management, situational awareness is invaluable.

The faster officials can leverage location intelligence by identifying threats, incidents or malfunctions, the faster they can coordinate an appropriate response. Ensuring a safe, enjoyable experience at events for fans every year is a massive undertaking. To truly improve situational awareness, stadiums and entertainment venues alike need to adopt a unified approach to monitoring key data.

Stadium management teams responsible for weather, security and facilities, need a viable way to share information and work together to prevent and respond to both minor and major incidents. While no system is a one-size-fits-all solution for security, Live Earth's extensible and customizable platform allows users to visualize their systems on a single screen operating in real-time alongside other rich data from live layers, giving them actionable insight.

In the security industry, directors face age-old problems, such as lightning, along with newer threats brought by changes in technology, such as drones. However, their job to keep fans, teams and stadium staff safe is constant. Live Earth empowers security operators and facility managers to be proactive, helping them streamline daily operations to mitigate extraneous costs, improve the overall fan experience and keep their stadiums secure.

For more information, or answers to any questions, please contact Live Earth at www.LiveEarth.com.

Live Earth produces the world's fastest live map. Live Earth is a Real-Time visualization platform that connects data streams from various systems, sensors, vehicles and video, providing one operational view. Its unique and interactive features like play, pause, and rewind, instant alerts, and out-of-the-box integrations are intuitive and easy to use.

Live Earth was originally developed for military use and is trusted to manage complex and critical operations. The platform is CJIS ready and SOC II compliant and designed to protect sensitive information. Live Earth is a trusted solution for top public safety and physical security organizations, providing critical information and proactively helping solve real-time problems that require a combined operational view.

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