

**DOUBLE  
ISSUE**

# SECURITY & BORDER PROTECTION CST & CBRNE SOURCE BOOK

## VIRTUAL TACTICAL PRESENCE



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# MAINTAINING A VIRTUAL PRESENCE

The need for mobile video-based collaborative capabilities to enhance situational awareness in military and tactical operations is driving technology evolution.

By Jerome Pitts, Librestream Technologies, Inc.

**T**imely decisions are critical in military operations. The distance that separates teams from command centers and specialized subject matter experts can make timely, informed decisions a challenge. Teams are under extreme pressures to keep assets operational and assess situations in the field - immediately. Librestream offers a better way to connect these remote teams with expertise virtually.

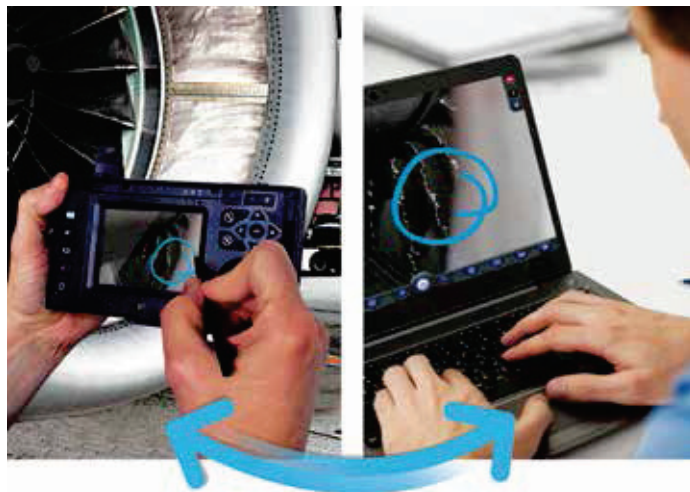
Imagine this...a fighter jet is grounded and the inspection requires specialized knowledge that isn't available at the base. In fact, the technician and the expert are continents apart. Using virtual presence technology, the field technician calls in a remote subject matter expert and together they inspect the aircraft, determine the repair plan, and within two hours declare it ready to fly. No delays or expenses incurred, in spite of the large distance between the two parties.

In the field, the technician is pointing a mobile camera device at the faulty asset and securely sharing video with a remote subject matter expert. The subject matter expert can even bring in additional resources or suppliers in other facilities to get their input simultaneously. Together, they all view the live video, talk, share pictures and draw on-screen to troubleshoot the issue. They even store pictures and record the session for future reference and training, if desired.

There are a variety of applications of virtual presence being employed by the military. The Joint Engineering Disposition Infrastructure (J.E.D.I) program was the initial project with the United States Air Force. Librestream's Onsight rugged smart cameras connect remote experts during inspections and diagnostics related to aircraft at various air force bases. Technicians based at the hanger will remotely connect the expert located at the command center to review an engine.

## CST Support

The Weapons of Mass Destructions - Civil Support Team (WMD-CST) connects remote experts through the Onsight EX certified rugged smart cameras to provide visuals in potentially hazardous environments. Specialized trucks with satellite equipment and a mobilized central command center are set up off site. Teams



A field technician collaborates with remote experts by sharing live video, talking and drawing onscreen to resolve the issue immediately. (Librestream)

with hazmat suits are deployed out into the field sharing visuals to remote experts back at the mobilized command center. Information from the feed allows the command center to assess next steps and coordinate resources and teams.

To truly drive efficiencies and benefits, virtual presence needs to take communications well beyond the traditional platforms. Onsight is the only enterprise-grade video collaboration platform that focuses on field operations. Unlike traditional online meeting, consumer-grade video chat, and video conferencing tools that are designed for face-to-face interaction, Onsight addresses the need of remotely solving challenges in the field. The platform can integrate with standard video conferencing systems such as Cisco Telepresence rooms. For operations, it's not about seeing the person on the other end of the call, it's about clearly seeing the problem remotely and solving it immediately.

Military teams can virtually collaborate anywhere, anytime and with anyone on a moment's notice from any location. Onsight provides full security over content with end-to-end encryption and security; control over bandwidth usage to manage strict military networks; integration with standard video conferencing systems; and centralized control over Onsight licenses and overall management of the system. Central experts can even remotely control the camera in the field, while all parties see the same video, talk, share images and telestrate onscreen.

As mentioned, military teams are already using Onsight to analyze and resolve equipment issues, assess situations, perform inspections, and mentor teams virtually. Onsight Connect collaboration software runs on the desktops of experts and in command centers while the rugged handheld Onsight smart cameras are deployed in the field or software on mobile devices are deployed in the field.

### Core Capabilities:

- Remote teams collaborate immediately with live video, audio, drawing and images
- Fully secure solution with end-to-end encryption and wireless security
- The ability to control bandwidth settings to fit strict military network requirements
- Centralized control over Onsight licenses and overall management of the system

**Different Virtual Presence Usage Cases within Military:**

- Remote equipment or facility inspection
- Leverage shrinking expert pool
- Streamline maintenance and repair
- Shorten turnaround time
- Situational awareness
- Training and mentoring in field
- Hazmat inspection
- Knowledge management

The Onsight platform also includes an accessory to share live visuals from other specialized instruments such as borescopes, thermal imaging or ultrasonic devices. By simply plugging in these external devices to the Onsight Collaboration Hub, teams can share these critical visuals with the far end expert. The Onsight Embedded SDK also provides an ability to integrate the Onsight video collaboration experience into an existing or new military application for a fully custom experience.

**Staff Development and Succession Planning**

A common scenario seen throughout multiple industries, including the military, is the shrinking pool of experts due to retirement. Once a seasoned expert retires, it is hard to capture the knowledge they have gained over the years. With Onsight, teams can build a knowledge base of live video sessions. Many organizations have a 3rd party knowledge management system or training applications already in place to access all training files. Onsight sessions, including video recordings and images can be integrated into these systems for quick retrieval of specific information on a piece of equipment.

**Leveraging Expertise to Inspect Aircraft**

The Air Force leverages remote experts to help troubleshoot mechanical issues of its fleet of cargo planes. These aircraft, some of which have been in service for over 30 years, deliver equipment and supplies for the Air Force. High attrition rates have required the Air Force to look into technologies to leverage their distributed pool of experts. In one situation, the ability to leverage expertise using live video collaboration had a major impact. Prior to engaging a remote expert, an on ground team initially determined that all four engines of an aircraft must be replaced. To confirm this assessment, the on ground team used an Onsight rugged smart camera to bring in a remote expert to further inspect the engines virtually. Together, they discovered that only one engine needed to be replaced. This discovery saved the Air Force \$6 million, as each engine cost approximately \$2 million to replace.

**Reducing Travel Requirements and Delays**

The military has hundreds of helicopters deployed worldwide with a highly specialized technical group that supports any maintenance and inspections of these helicopters. One support group had 30 individuals, but because of retirement and budget cuts, this group had decreased to 16 individuals. The problem they faced with this smaller group of specialists was an increase of travel and maintenance turnaround times. Live video collaboration provides an opportunity for remote

experts and ground technicians to decrease turnaround time and travel.

**Improving Turnaround Time**

In the commercial industry, there are many opportunities to improve turnaround time for grounded aircraft using live video. In one situation, a large commercial aircraft was grounded due to a bird strike on landing. To assess whether the aircraft could be flown, the local airline maintenance crew needed input from colleagues in another city and from the original OEM manufacturer. The two remote teams watched the live video stream using Onsight in the hangar and heard the sound of the problem. The teams collaborated by drawing, communicating, as well as remotely controlling the camera in the field to get the information needed to make a decision. After two hours, they determined the aircraft could be flown. The Onsight solution is estimated to have improved turnaround time by 60%.

With the advent of mobile virtual presence technologies, secure video collaboration helps to improve maintenance processes, reduce downtime, drive quality improvements, leverage experts and eliminate unnecessary travel. Now, for the military, engaging in a high quality and productive video collaboration session has become as simple as making a phone call. ■

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The banner features a collage of images showing military personnel and experts in various settings, including a man in a military uniform, a man in a blue cap, and a group of people in a meeting.