



## Reality Mobile® — Reinventing Mobile Collaboration

What if you could be in ten places at once? Or 100, or even 1,000? What if you were able to locate any member of your remote team and see what they are seeing in real time?

Now, what if anyone or everyone on your team could simultaneously view critical information appearing on a computer screen back at headquarters or live events at a remote location? Think about the whole new world of possibilities created by that real-time mobile collaboration.

RealityVision turns equipment you may already own — smart phones, laptops, digital cameras and sensors — into a powerful video communications and collaboration network. It runs on your existing IP infrastructure.

RealityVision runs on off-the-shelf commercial hardware and works with virtually any wireless network — including cellular, tactical wireless and satellite systems. Endlessly expandable, and compatible with low- and high-bandwidth networks, RealityVision scales easily as you grow. And as new hardware innovations become available, RealityVision is positioned to make the most of them.

### Introducing RealityVision® 3.1

From day one, our focus has been on the enterprise need for strict security, rigorous manageability and simultaneous information flows in multiple directions—often ad hoc and in emergency situations—and a very high value on collaboration and real-time decision-making. To accomplish that, the RealityVision platform was built on a principle of mobile video collaboration: incorporate many different visual sources and allow each enterprise to easily tailor the sources it wants to share with authorized users.



The greatest benefit of the [RealityVision] system is the ability to quickly share information among team members regardless of location. This capability may be leveraged in a variety of ways including remote identification of suspicious objects and as a situational awareness application during an emergency situation."

— U.S. Department of Homeland Security  
(Operation RealEyes)

The RealityVision system is a major tool in keeping ConEdison's customers and employees safe. The company recognizes it as a valuable communication system between field employees and control room supervisors."

— Con Edison

# Features and Benefits

## EASE OF USE

### Instant Global Reach

All system components run on off-the-shelf hardware and require only an Internet connection to communicate with each other. Virtually any wired or wireless Internet connection will work, including commercial cellular, WiFi, satellite, and tactical wireless mesh networks

### Ease of Integration

The system is specifically designed to allow for integration with other components, including situation management, video surveillance, and artificial intelligence solutions

### Broad Mobile OS Support

RealityVision supports Apple®, Android®, Windows Mobile®, Blackberry® and Windows® operating systems.

### Intuitive Design

Instinctive design allows management console operators and remote device users to easily find and share critical information:

- Categorize video sources in different ways for ease of presentation to users
- Instant access to all available video sources—including networked camera feeds, RealityVision Screencasts™, user feeds and video files.
- Create a customized list of favorite video feeds for faster access to frequently used sources
- Readily access your own archived videos

## RAPID, RICH INFORMATION DELIVERY

### User-Initiated Video Streams

Users can immediately stream video feeds from virtually any camera source, each tailored to an organization's specific operational requirements. Camera sources can range from microscope cameras to cell phone cameras to webcams to handheld camcorders to long-range telephoto devices to external cameras such as UAV feeds.

Users can also stream their location information and initiate a one-button alert for priority attention from the console operator.

Users can directly access/view their own archived video.

### User Text Tags

Device users can add a descriptive text comment at the end of an incoming video stream, extending the rich metadata available with each stream.

Android, iPhone®, iPad® users can add comments to a video session as a whole or to any individual frame within a view they are viewing.

A Console operator can also independently initiate a text comment while viewing any live or archived user stream.

### Screencast™

Any console operator or RealityVision PC user can select one button to define any region of the screen and stream its contents as a live video source within the RealityVision network. The feeds are simultaneously saved in the RealityVision archive for subsequent retrieval, annotation, analysis and redistribution.

A separate Screencast version is available for unmanned PCs or when multiple portions of a PC screen need to be streamed at the same time to different users.

Screencasting is an ad-hoc integration tool because it provides a very easy way to share complex data being rendered on a PC screen—SCADA data, 3D modeling, schematics, diagrams and much more—without the need for any integration with back-end systems.

Network Cameras	<p>Select any of your fixed or mobile network cameras to be viewed securely by your remote users. The system supports the use of multiple video formats and camera types and remote pan-tilt-zoom (PTZ) controls.</p> <p>Through a heartbeat check, network cameras not currently transmitting video feeds will be detected by RealityVision and shown as unavailable.</p>
Video Files	<p>Console operators can easily import video files—from another RealityVision server or from another source—for immediate distribution to authorized users. For example, in the law enforcement and military context, the file can be a critical segment of surveillance imagery. In the commercial context, it can be footage of a security incident or system breakdown.</p>
Video & Data Archive	<p>Archived video is stored on a frame-by-frame basis for easy retrieval, display, analysis and redistribution.</p> <p>Archived video is presented with all available text comments, location information and other metadata. Authorized users can add to existing comments or create new ones. All text comments are time-stamped with the username for auditing purposes.</p> <p>Video sessions are easily exported and imported to and from the RealityVision system to ensure all team members can access critical information.</p>
<div style="background-color: #444; color: white; padding: 5px; text-align: center;">DYNAMIC INFORMATION DISTRIBUTION</div>	
Video Availability	<p>Using a supported device, any user can independently access any available video source—any user-initiated stream, Screencast, camera feed or video file.</p> <p>Android, iPhone and iPad users of RealityVision have enhanced video search functionality.</p> <p>The console operator can push any video source directly to users. While viewing a user feed, the operator can pause, rewind it to a frame of interest, and send to remote users from that point so they do not miss the relevant action. Other critical data can be shared with users as well, including images, files, documents and Web page content.</p>
Information Context	<p>Console operators have multiple annotation and notification options to let users know exactly what they are being presented for viewing, and gives remote users more flexibility to process incoming commands immediately or at any later point through the user's personal history log.</p>
User History	<p>At any time, a user can access a personal history log to independently retrieve any video stream or other data file sent previously to that user by a console operator. A police officer, for example, can instantly retrieve a suspect's photo, and a commercial employee can instantly retrieve a Screencast of a 3D model sent days or weeks earlier.</p> <p>Each time a user signs on to RealityVision, he or she will be notified of any pending video sources and other data that had been sent by a console operator while the user was signed off. At that point, the user can process the commands immediately or at any later point.</p>
Console Messaging	<p>Console operators can embed a text message with issued commands for greater context, such as explaining to recipients why they are being sent a live video feed from another user, and can request a user response.</p>
Console Annotations	<p>In addition to pushing video streams, the operator can also create and annotate images to share with users. Images can be created in multiple ways—such as pausing on a live feed, retrieving an image from the video history, or grabbing an image directly from a PC screen. Recipients can view the image with and without the annotation overlay.</p>
Cued Video	<p>Depending on the stream, a console operator A live video session can be paused, rewound to a frame of interest, and sent to remote users from that point so they do not miss the relevant portion of the video.</p>

## ENTERPRISE ARCHITECTURE & SECURITY

Network Bandwidth Optimization	Allows users to stream and receive actionable visual information in high bandwidth conditions, low bandwidth conditions or while switching between the two. The transmit protocol for streaming from the device over networks is optimized to adapt instantly to changing network conditions, maintain image quality and prevent partial reconstruction of the images at the viewer.
Distributed Architecture	System components can be installed behind the enterprise firewall on different hardware and in different locations/zones in support of IT best practices
Secure Communications Channels	SSL/TLS support out of the box; FIPS 140-2 compliant VPN options. Please contact Reality Mobile directly if you require Suite B level encryption.
Data Traffic Optimization	Power management and heartbeat checks are used to minimize network traffic and preserve battery life – critical for mobile users.
Server Scalability	Flexibility to pool, segregate and group users across physical and virtual servers; the import-export feature allows data to be shared across servers while preserving server autonomy.
Metadata Indexing	Incoming video streams are indexed against a multitude of metadata elements including user, device, location information and user-generated descriptive text tags, enabling broad searches and accurate identification of videos.
Automatic Video Transcoding and Bandwidth Adaptation	Video sources are transcoded as necessary for user viewing, and video frame rates are adjusted for limited and varying network bandwidths.
Customizable Transmit Compression, Image Quality and Bandwidth Allocation	Android device users can customize their video streams to adapt instantly to the local network environment.
User Authentication	Activate the system's authentication procedures to verify the identity of each user against Microsoft Active Directory or other accounts. The system also supports the creation of additional authentication modules.
Forced Sign Off	Management console operators can remotely sign off a user in the event a device is lost while logged into the network.
Enterprise Toolset	Customizable operations setting, audit log, database management and other administrative tools.

## GPS TRACKING

Track Your Personnel	Easily pinpoint the exact GPS location of your field personnel, via their mobile devices, and track their on-going movements in real time.
Track Your Video Sources	Easily pinpoint the exact GPS location of each video source, allowing you to know where the sources are in relation to each other, to your personnel and to unfolding events.
Common Operating Picture	<p>The management console includes a dynamic mapping display to visualize the tracked personnel and video sources. Out of the box choose Google Maps or Bing Maps 2D or 3D.</p> <p>Each live or archived video source can also be viewed alongside its own location map showing its precise origin for better context.</p>

# How the RealityVision® Platform Works

## CREATE A PRIVATE CHANNEL FOR YOUR AUTHORIZED USERS.

The RealityVision server software is the system hub. It creates a private communication channel for your users. Out of the box, all communications to and from the server can be secured with user authentication and high-level SSL encryption. It even works within your existing VPN framework.

## STAND IN THE SHOES OF YOUR TEAM ON THE GROUND AND SEE WHAT THEY SEE.

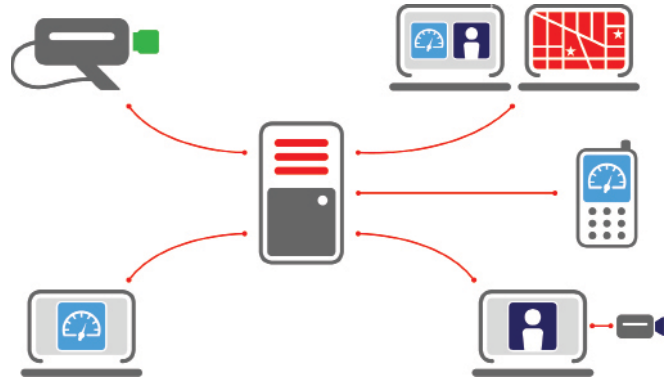
The system includes two user components for maximum flexibility. RealityVision Mobile runs on a wide variety of iOS, Android®, Windows Mobile® and Blackberry® devices. RealityVision PC runs on your Windows-based computers. Depending on the device, your users can:

- Stream video feeds from virtually any camera source - share any critical visual detail in real time
- Access any video source that's available within the system.
- Add descriptive text to a video stream, extending the rich metadata available with each stream
- Simultaneously view video with location information or associated comments.
- Utilize playback controls (pause, rewind, fast forward) to control the video they are viewing and add text tags to it.
- View multiple RealityVision video feeds on a map; view thumbnails of available videos; search for archived video using location information.
- Access any video source that's available within the system.
- Remotely control network camera movements.
- Initiate a silent alert for assistance.

## CREATE A SHARED PERSPECTIVE WITHOUT UTTERING A SINGLE WORD.

The RealityVision management console allows you to visualize, monitor and control all the data traffic within the system. Through our console functionality, you can:

- Track the location of all system users and video sources.
- Share any video source immediately with any or all system users.
- Remotely compel a user's device to take specified actions to create and share urgently needed information.



## LET YOUR DISPERSED USERS SIT AT YOUR CHAIR AND SEE WHAT YOU SEE.

RealityVision Screencast™ technology allows command centers or desktop users to share the contents of their screens as a live video source. Floorplans, 3-D images, schematics, charts, photos — anything that can appear on a computer screen — can be instantly pushed to another team member anywhere in the world. Experts in different locations are able to collaborate and provide on-the-fly analysis and advice to remote teams.

## ELIMINATE THE TELEPHONE GAME.

RealityVision goes beyond telephone, email and videoconferencing services. Highly mobile and rich with features, this technology gives a remote team the power to take control of a mission- or business-critical situation as it happens — when opportunity is greatest.

For additional information, please visit us at [www.realitymobile.com](http://www.realitymobile.com) or call us at 703.636.7200.