



## 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 and collaborate about 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.

With RealityVision® 3.4 organizations can share mapping resources privately with their dispersed employees and customize the experience based on operational requirements. The mapping engine lets the customer control which map they want to appear across their user base, gives everyone a common visual reference point.

RealityVision turns equipment you may already own — smart phones, laptops, digital cameras and sensors — into a powerful video communications and collaboration network.

This revolutionary platform runs on off-the-shelf commercial hardware and your existing infrastructure. It 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 help you make the most of them.

### Introducing RealityVision® 3.4

At Reality Mobile, our focus is on enabling real-time collaboration and real-world decision making while meeting enterprise needs for strict security, rigorous manageability and simultaneous information flows in multiple directions—often ad hoc and in emergency situations. To accomplish that, the RealityVision platform was built on a principle of mobile visual collaboration: incorporate many different visual sources and allow each enterprise to securely share the sources it wants to share with authorized users.

Our latest release furthers a seamless visual and audio experience by incorporating additional mapping resources that historically have been trapped behind the corporate firewall.



“What this allows us to do — and to my knowledge, we are the only agency in the world that is currently doing this — is that when our police officers begin to respond to an incident, whether they are in boats, motorcycles or patrol cars, we can push down real-time video of the event they are responding to as they are responding,”

— Captain Don Farrell, Port of LA PD  
(Government Computer News)

“RealityVision allows our widely dispersed HAZMAT experts to seamlessly share live visual information with each other about emerging incidents and to collaborate to remediate and address situations in real-time”

— Tim O'Brien, Union Pacific Rail Road

# 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.
Ease of Integration	The system is specifically designed to allow for integration with other components.
Broad Mobile OS Support	RealityVision supports Apple <sup>®</sup> , Android <sup>™</sup> and Windows <sup>®</sup> operating systems.
Intuitive Design	<p>Easy-to-understand design allows Management Console operators and remote device users to easily find and share critical information. With virtually no learning curve, RealityVision users can:</p> <ul style="list-style-type: none"><li>• Categorize video sources in different ways for ease of presentation to users</li><li>• Instantly access all available video sources—including networked camera feeds, RealityVision Screencasts™, user feeds and video files.</li><li>• Easily visualize available location information and text tags while watching a video stream</li><li>• Use the “Find” feature, either in split-screen or full screen mode on the iPad to quickly identify any mapped user or video source.</li><li>• Readily access your own archived videos</li><li>• Easily share video feeds among authorized users along with associated mapping information and other contextual data</li><li>• A bundled Push-to-Talk (PTT) option for Android and iOS users supporting a seamless visual and audio experience among them</li><li>• Access mapping resources</li></ul>

## RAPID, RICH INFORMATION DELIVERY

User-Initiated Video Streams	<p>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 and cell phone cameras, to webcams to handheld camcorders to long-range telephoto devices and external cameras such as UAV feeds.</p> <p>Users can also stream their location information and initiate a one-button alert for priority attention.</p> <p>Users can directly access their own archived video and add text tags to it.</p>
Peer-to-Peer Video Sharing	Users can share video feeds they are watching or transmitting with other authorized users, along with associated mapping information and other contextual data.
Bundled Push-to-Talk (PTT) Option	Android and iOS users can have secure PTT audio conversations with each other while viewing and sharing available video sources. The bundled PTT is based on the SIP open standard, giving the customer flexibility to select its own third-party SIP server to manage the voice traffic.
Mapping Resources	Control which map is used across all devices and add additional custom data and image overlays for enhanced operational context
User Text Tags	<p>A transmitting user can add a descriptive text comment to the video stream, extending the rich metadata available to others when viewing the feed.</p> <p>Depending on the device, users can add comments to any live or archived user stream as a whole or use the playback controls to comment on one or more specific frames.</p>
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	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>Screencast™</p>	<p>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.</p> <p>Android and iOS users can share screencasts they are viewing with other authorized users along with all associated metadata.</p> <p>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.</p> <p>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.</p>
<p>Video &amp; Data Archive</p>	<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 from the RealityVision system by authorized personnel.</p>
<p><b>DYNAMIC INFORMATION DISTRIBUTION</b></p>	
<p>Video Availability</p>	<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>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> <p>Android, iPhone and iPad users have the ability to share a video feed directly with other authorized users.</p>
<p>Information Context</p>	<p>Users know exactly what they are being presented for viewing, and have the flexibility to process incoming video sources immediately or at any later point through the user's personal history log.</p>
<p>User History</p>	<p>At any time, a user can access a personal history log to independently retrieve any video stream sent previously to or by that user.</p> <p>The "Inbox" will list all video streams received by the user. The "Outbox" will list all video streams shared by that user. Selecting any entry will play the video sent/received through the system, and give the viewer the option to share the content with others.</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 while the user was signed off. At that point, the user can process the information immediately or at any later point.</p>
<p>Contextual Messaging</p>	<p>Console operators and users can embed a text message when sharing a video stream for greater context, such as explaining to recipients why they are being sent a live video feed from another user. Console operators can also request a user response.</p>
<p>Enhanced iPad Mapping Display</p>	<p>The iPad map display now incorporates a new "Find" feature. This allows an iPad user to type in the name of a mapped RealityVision user or video source to quickly find that item on the main map.</p> <p>If a mapped user is watching multiple video feeds at the same time, an iPad user can now see what that mapped user is watching with a new multi-watch pop-over on the main map display.</p>
<p>Console Annotations</p>	<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>
<p>Cued Video</p>	<p>Depending on the stream, 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>
<p>Read Receipt</p>	<p>The console operator can instantly review the status of video sources and other commands sent to users and obtain detailed information about the command and each user's response.</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 and Bandwidth Allocation	Android and iOS 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 are available.

## 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

## A POWERFUL, 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.

## SEE EXACTLY WHAT YOUR TEAM SEES ON THE GROUND, IN THE AIR OR ON THE WATER.

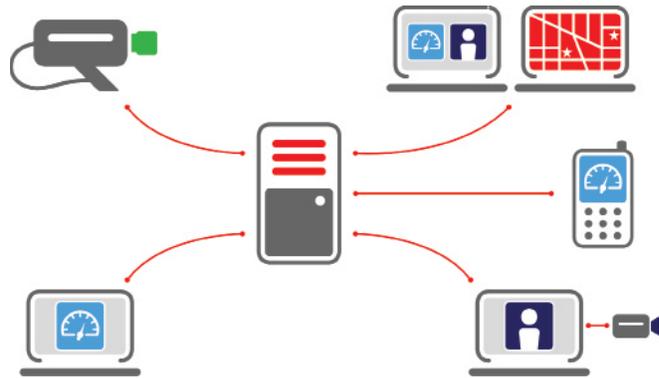
The system includes mobile applications for Android, iOS and Windows-based devices. Depending on the device, your users can:

- Stream video feeds from virtually any camera source - share any critical visual detail in real time.
- Integrate Push-to-Talk (PTT) audio communications through 3rd party SIP servers.
- Dynamically share video feeds you are transmitting or watching with other authorized users.
- 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 and view thumbnails of available videos.
- Access any mapping resource 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.

RealityVision management console allows you to visualize, monitor and control all the data traffic within the system.

A "light" version of the management console is available on the iPad - All mapped RealityVision user positions and video sources are viewable. A "Find" feature allows for instant access. This context is also presented in the side map of any video feed with location-based information.



## LET YOUR DISPERSED USERS SEE WHAT YOU'RE SEEING IN REAL-TIME.

RealityVision Screencast™ technology allows command centers and RealityVision PC 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.

## GO FROM TELEPHONE TAG TO REAL-TIME GLOBAL COLLABORATION, IN AN INSTANT.

RealityVision goes beyond telephone, email and videoconferencing services. Highly mobile and rich with features, this technology gives remote, geographically dispersed teams the power to take control of a mission- or business-critical situation as it happens — when opportunity is greatest. Barriers to gathering and distributing data simply no longer exist. When minutes or even seconds count, RealityVision changes the equation.

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