

introducing



In the future: low cost of ownership integrated in-vehicle video, with GPS tracking, will upload automatically to your server or secure cloud server for viewing securely online.

“ Storing our video evidence on Azure is like locking a video tape in a safe. ”

Sgt. Matt Bales
10th Judicial Drug Task Force

The future is now.

Watch a video feed of a high-risk stop as it happens while knowing the street level position of every car participating in the takedown. Think of the tactical advantage of having an overhead map view of all of your nearby assets in case the subject decides to bolt.

You can do this and more with CopTrax from Stalker, the police technology leader.

No Bulky DVR

No DVR or other type video recorder is needed. In fact, there is no dedicated system enclosure to take up scarce space in the vehicle.

Lowest Cost of Ownership

Less hardware means lower cost of ownership. Plus, uploading video to Cloud storage eliminates the backoffice cost and headaches of file storage, archiving, and retrieval.

Streaming Video with GPS Overlay

The CopTrax in-car video system streams video with GPS location information, accessible in real-time from any internet-connected computer.

Pre-set triggers initiate the video recording - lights on, exceeding a certain speed, keyed microphone, for example.

Uses Patrol Vehicle Laptop

CopTrax is software running on the vehicle's laptop. The video/audio file is written to the computer's hard drive to be uploaded in the background through its laptop's cellular phone card or through its wireless network connection.

Command & Control Center

- Live Look-In™. View mission-critical video from anywhere.
- Video playback with synchronized tracking data.
- Plus, powerful statistical and archiving tools.



"On premise" server



OR

Windows Azure
Microsoft Remote Data Storage Center
(Also known as the Cloud)

Ultra-secure video file storage, archiving, and retrieval.



Automatically upload streaming video with GPS tracking

(through 3G/4G Network or WiFi)

CopTrax Mobile

- Turns smartphone into a body-worn camera
- Broadcast streaming video and GPS tracking
- Manage tracking and video in the Command & Control Center

In-Car Video

- Uses patrol vehicle laptop computer.
- Full-featured touch-screen interface.
- Programmable automatic video triggers.



High definition camera



GPS Antenna



Rear seat camera



DISRUPTIVE TECHNOLOGY

CopTrax.net

In-Car Video

We see a future...

The CopTrax In-Car Video System turns the patrol vehicle's laptop, already present in about half of all U.S. police cars, into a streaming video and GPS tracking device. Video evidence is automatically uploaded without officer involvement, ensuring video evidence is safely off-loaded and archived.

The proprietary CopTrax application, written on Microsoft Azure's web app platform, runs like any other Windows program. CopTrax can be minimized and run in the background until a pre-set trigger event (siren, lights, etc.) initiates a switch from Patrol Mode to Incident Mode.



In the patrol vehicle, the officer is presented with a simple touchscreen interface composed of a video preview and two functional toolbars.

The main user controls on the interface include:

- Start / Stop recording
- Switch camera (front/rear)
- Take still photo
- Quick zoom
- Find a location or point of interest
- Covert Mode

The second Admin toolbar at the bottom:

- Video Upload and Playback Tools
- Camera adjustment
- Settings (system)
- Triggers (actions that begin recording)
- Incident Report types
- Show/Hide GPS data overlay



A separate wireless microphone captures speech and other sounds during incident and synchronizes it with the video signal.

Concurrently, CopTrax monitors vehicle latitude/longitude through GPS technology. Vehicle coordinates and travel information are continually updated and overlaid onto the video file. File transfer is completed by either 3G/4G cellular connection or wireless WiFi. Video segments are automatically indexed according to date, time and event identification; officer identification; GPS data; vehicle identification; case number; and type of incident that prompted the recording.

The officer and vehicle are positively located resulting in less contested evidence.

Automatic Uploads

Depending on signal strength and availability, the transfer of live, streaming video is managed, in the background, through the laptop computer's cellular phone card and a 3G/4G cellular connection.

Additionally, the transfer of recorded video from the laptop computer's hard drive can be handled wirelessly through the department's WiFi connection.



Microsoft Remote Data Storage Center
Ultra-secure video file storage, archiving, and retrieval.
 (Also known as the Cloud)

What Cloud Storage Means to You

Everyone's talking about the "Cloud" so here's what you need to know:

The Cloud is composed of many interlinked data centers located in different parts of the world. The idea is that data, in your case video evidence, is stored in several places so that if something happens to one copy, there are at least two other identical copies elsewhere.

The data centers that store your evidence are super secure. And we're talking more secure than your jail. They are under armed guard 24/7 with CCTV surveillance. Access is controlled in part with biometric (palm scan) interlock and even body weight scanners. Many have redundant electric grid connections. Most of all, their locations are a closely held secret. Bottom line: Your evidence files are not going to get lost, and they are not going to be accessible to anyone (including data center personnel) without your permission.

Finally, no more "disk full" messages. Ever. That's because you only pay for the storage you actually use from a practically unlimited capacity. If you use 5 gigabytes, that's all you're charged for. Need to store 1000 gigabytes? That and much, much more is available.

So if you're thinking about storing your video evidence on your department's server, give Cloud storage a look. Your data is safer and more secure with pay-as-you-go storage and unlimited capacity when you need it.

The patrol vehicle's laptop provides processing power to achieve less system cost while integrating with other vehicle systems.

Command & Control Center

The CopTrax Command & Control Center is the gateway to live video feed from each patrol vehicle as well as CopTrax Mobile App-connected smartphones. Video evidence is either stored on the Cloud-based Windows Azure system or on your own "on premise" servers.

The Command & Control Center can be securely accessed from any Internet-connected computer - from headquarters, from the Patrol Commander's residence, from the shift supervisor's vehicle laptop, you get the picture.



Crime Mapping Screen

Plus, the crime-mapping function visually represents areas and patterns of offenses leading to better allocation of resources.



Video Search and Playback Screen

Live Look-In™

The Command & Control Center can also plot multiple asset positions on a map and monitor them as they are moving in real time. In addition, CopTrax's video classification data entered at the end of an incident makes many secondary data dimensions possible, including:

- **Crime Mapping** - Statistical and other dataset information can be overlaid on the map image to analyze crime patterns.
- **Vehicle History** - Plot the complete track of where a vehicle has been - based on history.
- **Pre-event Recording** - A continuous recording loop of 30 seconds (or greater) of pre-event video, possibly capturing the incident that triggered the recording.
- **Geofencing and Proximity Markers** - Boundaries can be dynamically generated to isolate areas for more analysis.
- **Real-time Incident Reporting** - Sorts and groups incidents within a geographical area.
- **Archived Video** - Older video evidence captured by current in-car DVR systems can be uploaded and managed via the Command and Control Dashboard.

Live Look-In™ let's others follow the action, assuring tactical advantage and greater situational awareness.

CopTrax Mobile

Body-worn Camera Functionality (Smartphone App)

- Stream video with embedded tracking from an Android or Windows Mobile phone
- Tracking data transmits in the background
- Remotely start/stop video stream

What is Geocasting

Geocasting, the combination of geography and video broadcasting, is Global Positioning System data overlaid on Bing Maps, stored in the Cloud with Microsoft Azure, and available in realtime, delivered anywhere over the Internet. This powerful facet of CopTrax sets it apart from other in-car video systems.

Through the Command & Control Center dashboard, patrol vehicles can be monitored as they drive around a town, a city, or other geographic area. Combined with CopTrax's Incident Classification database, geocasting information can reveal trends and patterns not apparent when reviewing the raw data. Geocasting answers many of the "what if" questions law enforcement professionals ask.

Case Study: ONR

CopTrax technologies - realtime video streaming and geocasting - have been included in operations by the U.S. Office of Naval Research (ONR).

In 2009 and 2010 the ONR trialed CopTrax software during two exercises. They conducted training exercises working in conjunction with local law enforcement to practice intercepting terrorists planning to plant IEDs on American soil. By using our innovative Geocasting software solution paired with new smart phone technology, the soldiers and law enforcement officers were able to track, record, broadcast, and coordinate movements on the ground via video feeds in "real time." Ultimately they foiled and apprehended the exercise's perpetrators.

Another ONR study explored options for reducing IT costs while enabling a mobile workforce, and testing of a mobile command-and-control solution comprised of off-the-shelf components. The exercise enabled ONR to demonstrate innovative ways to leverage IT for collecting and analyzing operational data.

The advanced mobile computing (AMC) proof-of-concept exercise showcased the U.S. Office of Naval Research Disruptive Business Technologies group's model of leveraging off-the-shelf and open source technologies to support rapid technology deployment. In both scenarios, CopTrax technologies demonstrated their utility and ease of integration with existing IT infrastructure and applications.

CopTrax is a product of Stalker Radar

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Hardware

Front Facing Zoom Camera

- High Def 1080i – Full 1080p HD sensor for superior sharpness and image quality
- Auto Focus – Stays in focus at any distance
- High-Precision Glass Element – Wide-angle glass element lens with advanced, high-precision optics
- True Color Technology – Automatically delivers bright and colorful video
- Clear Frame Technology – Smooth, detailed video
- Dimension: 2.5" x 1.5" x 2" (camera body)



Wireless Audio

- Full Duplex DSS Transceivers – Enable mic unit to automatically activate whenever system is recording
- Internal, High Sensitivity Microphone Element Built in Away Unit – 100% cordless operation
- Instant Synchronization Feature – Enables any mic unit to work with any base; simultaneously prevents "cross-talk" between systems
- Unique Two-way Intercom System between Base/Charger and Away Unit
- Mic dimension: 1.75" x 2.375" x .875" (minus clip)



GPS Antenna

- Simple setup and USB connection



Rear Seat Camera

- Low Light Day/Night Camera – 12 bright IR LEDs for clear pictures in total darkness
- Built-in High Fidelity Microphone – Captures clear audio
- Wide-Angle Lens – Covers the entire back seat
- Dimension: 2.5" x 2.125" x 1.75"



For information

and specifications

on the CopTrax system,

visit our web site

CopTrax.net