

## CASE STUDY

# Connecticut Division of Criminal Justice – Office of Inspector General

ProHawk AI computer vision restoration used in Legal Forensics for the State of Connecticut Criminal Justice Department

## Executive Summary

Forensics investigations that rely on video or image evidence can face significant challenges with the quality of the visual evidence, which can occur due to various factors such as poor lighting, low resolution, or environmental conditions during recording. Even minor details can sway the outcome of a case.

The Connecticut Division of Criminal Justice – Office of Inspector General is using ProHawk AI's advanced computer vision restoration technology to improve the clarity, detail and accuracy of visual evidence. This case study reviews the results of using ProHawk Vision in two distinct court cases involving incidents of use of force by law enforcement.

## Overview

Industry: State Government

Organization: Division of Criminal Justices – Office of Inspector General

Location – Rocky Hill, CT



## Solution Highlights

- ❑ ProHawk Vision Workstation software on a forensics workstation restores images and videos that display side-by-side with original.
- ❑ Improves the clarity, detail and accuracy of visual evidence while maintaining its integrity.
- ❑ Increases the objective analysis of critical visual evidence in criminal cases.

## Addressing Forensics Investigation Challenges with Visual Evidence

Forensics investigations that rely on image or video evidence face several significant challenges. One of the primary issues is the degradation of visual data, which can occur due to factors such as poor lighting, low resolution, or environmental conditions during recording. Blurred, grainy, or obscured visuals can impede the ability to accurately identify individuals, objects or actions, making it difficult for forensic experts to draw definitive conclusions. This problem is exacerbated when the evidence is captured by security cameras or mobile devices with limited capabilities.

The application of computer vision restoration technology in legal forensics is a cutting-edge approach that can significantly improve the analysis of critical visual evidence in criminal cases. This technology offers the potential to provide an unbiased and precise view of events, ensuring that justice is served fairly and accurately.

## Use Case 1: Exonerating an Officer's Executive Use of Force

In this investigation, an officer was involved in an altercation with a suspect who later developed a blood clot and died four days after the incident. ProHawk Vision Workstation was used to restore dashcam footage, body camera recordings, and other visual evidence to:

- Improve the clarity and resolution of the footage.
- Reveal hidden details or actions that may have been missed in the original footage.
- Assist in the reconstruction of the sequence of events leading up to the altercation.
- Help determine if excessive force was used or if the officer acted within the bounds of the law.

The application of ProHawk AI for video forensics in this investigation provided a more comprehensive understanding of the incident and ensured that any decision regarding the officer's actions was based on a thorough and unbiased analysis of visual evidence.

## Use Case 2: Perpetrator Firing Shots at an Officer's Car

In this case, a perpetrator fired three shots from an AR-15 through an officer's front windshield and casually discarded the weapon. ProHawk Vision Workstation was used to restore video dashcam footage to help determine:

- Perpetrator's identity and distinguishing features.
- Trajectory of the shots and sequence of events.
- Additional contextual details that aided in the investigation.

By using ProHawk Vision forensics in this case, law enforcement gathered critical evidence that helped identify and apprehend the perpetrator, as well as shed light on the circumstances leading to the attack.

## Key Benefits and Outcomes

The application of ProHawk's computer vision restoration technology into the legal forensics processes of the State of Connecticut Criminal Justice Department significantly impacted the investigation and adjudication of complex criminal cases. By improving the clarity, detail, and accuracy of visual evidence, computer vision AI restoration supported the pursuit of justice while safeguarding the rights of both law enforcement officers and individuals involved in criminal incidents, helping to maintain the highest standards of fairness and transparency in its criminal justice system.

ProHawk AI's patented algorithms can restore degraded or noisy images and footage by improving resolution, reducing noise, correcting distortions, and even seeing through tinted windows, thereby revealing critical details that may have been previously obscured or missed. By restoring degraded footage and images and ensuring the integrity of images and videos, ProHawk AI helps provide courts and insurance companies with accurate and reliable evidence for fair and just outcomes, reducing the risk of wrongful convictions, acquittals or settlements.