

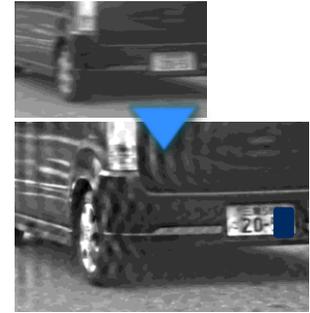
# Specific Scene Analysis Software

Global

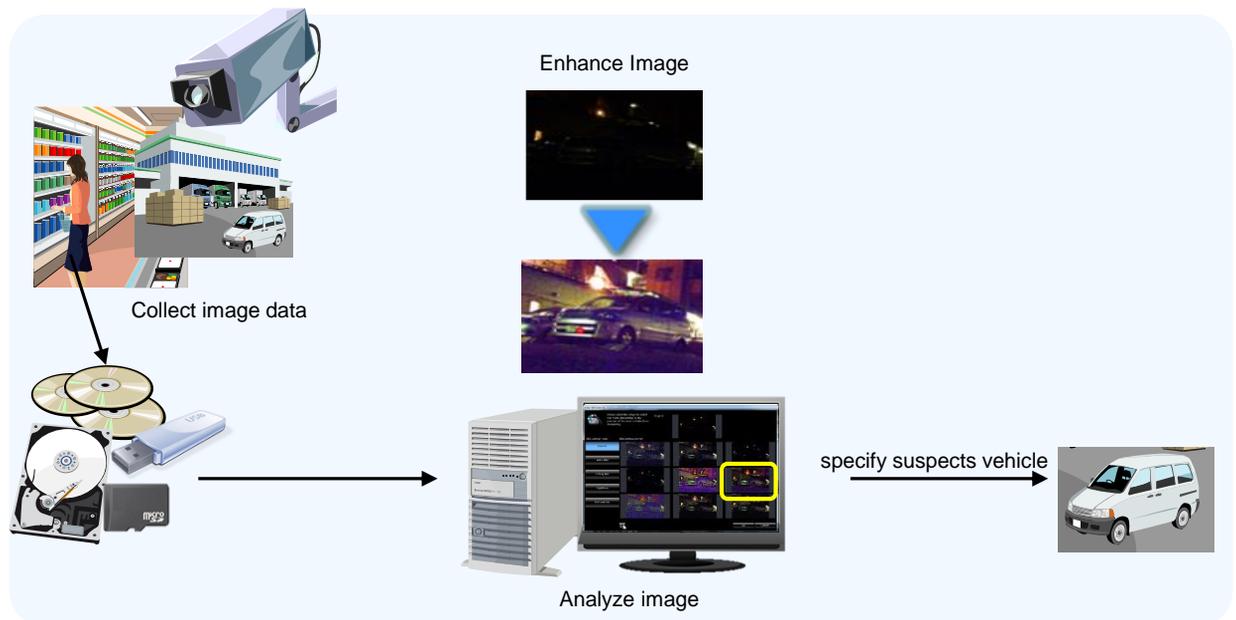
NEC has various image enhancement technology with a long history of research and development, which contributes to safe and trusted society. NEC's Specific Scene Analysis Software can sharpen and enhance images in order to help police officers to reduce effort and time spent on image analysis dramatically.

## Image Enhancement

- Various image sharpening technologies such as brightness adjustment, denoise, and super resolution.
- Automatic process and user friendly interface make it easy for police officers to operate.



## Operation Image



## Function List

Category	Sharpening method	Description
<b>Luminance Correction</b>	Histogram Flattening	Adjust contrast and brightness to improve the balance of the whole image.
	Gamma Correction	Display image in a more nature color.
	Tone Reversal	Turn over tone and luminance (in negative positive state).
	Posterization	Reduce color number and display the image monotonously.
	Homogenization lighting	Enhance contrast and lightening the whole image.
<b>Unsharp</b>	Unsharp mask	Enhance color; light and darkness of the edge of objects.
	Laplacian	Detect and emphasize only the edge of object.
<b>Denoise</b>	Gaussian	Smoothing filter that delete noise from image.
	Bilateral	Remove noise without blurring the outline edge of the image.
	Median	Analysis image pixel around noise and change it into intermediate value.
	Remove block noise	Remove block noise which usually seen in JPEG file.
	Remove grain-like noise	Remove grain-like noise from image.
	De-haze/HDR/Noise reduction	Sharpen image taken in a bad weather or dark place.
	Remove comb-like noise (Deinterlace)	Remove comb-like noise caused by fast movement.
	Blur reduction	Removes the blur caused when images go out of focus due to camera shake.
	Multiple denoise	Delete noise from one image by referencing to multiple images with the same angle and size.
<b>Super Resolution</b>	Super deblur	Increase image resolution after applying blur reduction.
	Multi super-resolution	Generate one clear image by superimposing multiple continue frames from video and increase image resolution.
	Expansion/Reduction	Increase or decrease image resolution.
<b>Detection</b>	Moving object detection	Detect moving object from recorded video and recognize object by shape and color.

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