

Advanced JPEG Image Validation and Recovery



The JPEG image is one of the most popular digital picture formats in use today and is frequently of great interest during forensic examinations involving indecent images of children.

The accurate recovery of JPEG images is extremely difficult using traditional carving techniques because of the complicated structure of the file. Modern JPEGs can have thumbnail and preview images embedded within them which makes simple Header/ Footer carving of accurate data impossible. Traditional techniques are likely only to be able to extract thumbnail or preview images leaving the main image un-extracted.

To solve this problem for JPEG images, Blade implements a comprehensive advanced validation routine. The validation routine understands the internal structure of the JPEG file and employs verification and checking as the data is extracted. If the image cannot be rendered as a full (or partial image), it is not extracted. Data which fails validation is recorded in the Validation Error Log. This log identifies the exact physical location on the source and provides a reason for non-validation.

We would encourage you to test this against other software which claims to accurately carve JPEG images.