



**A** brilliant orange butterfly lands on a child's hat. Using a video camera, his father captures the moment his son sees it—priceless. He wants to make a print of the moment to share with family and friends but the video footage is too grainy. Here is a product that can extract high-quality still images from video.

## Video Pics™

**How It Helps:** Operating on either a Macintosh® or Windows®-based computer, Video Pics software can extract clear, high-quality pictures from any video source, such as a camcorder, the Internet, or television. The software's algorithms are considerably faster and more flexible than methods based on traditional signal processing. Video Pics also can salvage otherwise unusable video images with its ability to zoom and motion-stabilize the video without any loss of detail. The only comparable product is offered by a Massachusetts Institute of Technology spin-off company, but it requires special hardware for use.



**How It Works:** The software uses proprietary algorithms to mimic how the human eye and brain operate together to process images. When people stare, their eyes capture several overlapping frames of an image and their brains construct a single, high-quality image based on these frames. Similarly, Video Pics software takes overlapping frames of video and produces a high-quality, still image with the sharpness and clarity of 35mm camera photos. The technology can increase the image's resolution so a shot can be reframed and magnified. Its still images can be used to produce 3,200 x 2,400 dpi printed images. Jitter, noise, and compression artifacts also are removed. Brightness can be adjusted without reducing image quality.



**How Much It Will Cost:** The price of the Video Pics software is \$199 for both Macintosh and Windows-based computers.

**When It Will Be Ready:** The software is available now. It has been sold to police and security forces for forensic applications, but has been most successful in the consumer market. The video editing applications are being targeted to professionals, and consumer software is aimed at facilitating e-commerce photo finishing of video frames.

**Who Is Working On It:** Irvine Sensors Corporation (ISC) developed this technology, and its subsidiary, RedHawk Vision, is commercializing it. RedHawk designs, develops, and produces imaging technologies and software. Founded in 1999, the company has since become affiliated with multiple software developers and established a forensic services unit for tapping the law enforcement market. RedHawk employs nine people and occupies 3,500 square feet of office space in Costa Mesa, California. For more information, contact John Carson of ISC at (714) 549-8211 or [jcarson@irvine-sensors.com](mailto:jcarson@irvine-sensors.com). RedHawk Vision's Web site is [www.redhawkvision.com](http://www.redhawkvision.com).




### MDA Origins

Video Pics software stems from research performed for BMDO's SBIR program. In 1997 and 1998 under SBIR Phase I and II contracts, ISC investigated a new level of wiring density that could approach the interconnectivity of neurons in the human brain. This led to the development of a new algorithm that emulates the way a brain acquires and retrieves information. BMDO is interested in this technology to improve the speed and accuracy of sensing, discrimination, and systems control functions of ballistic missile defense systems.

