MREL
BLASTING INSTRUMENTATION

## PROANALYST® SOFTWARE

MOVIE FORMATS: AVI, AVI 2.0, MPG, MOV AND CIN.

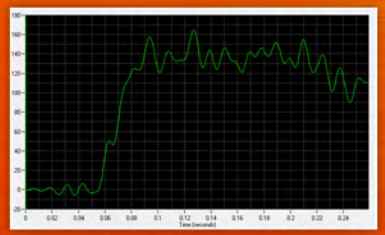
IMAGE SEQUENCE FORMATS: BMP, JPG AND TIFF.

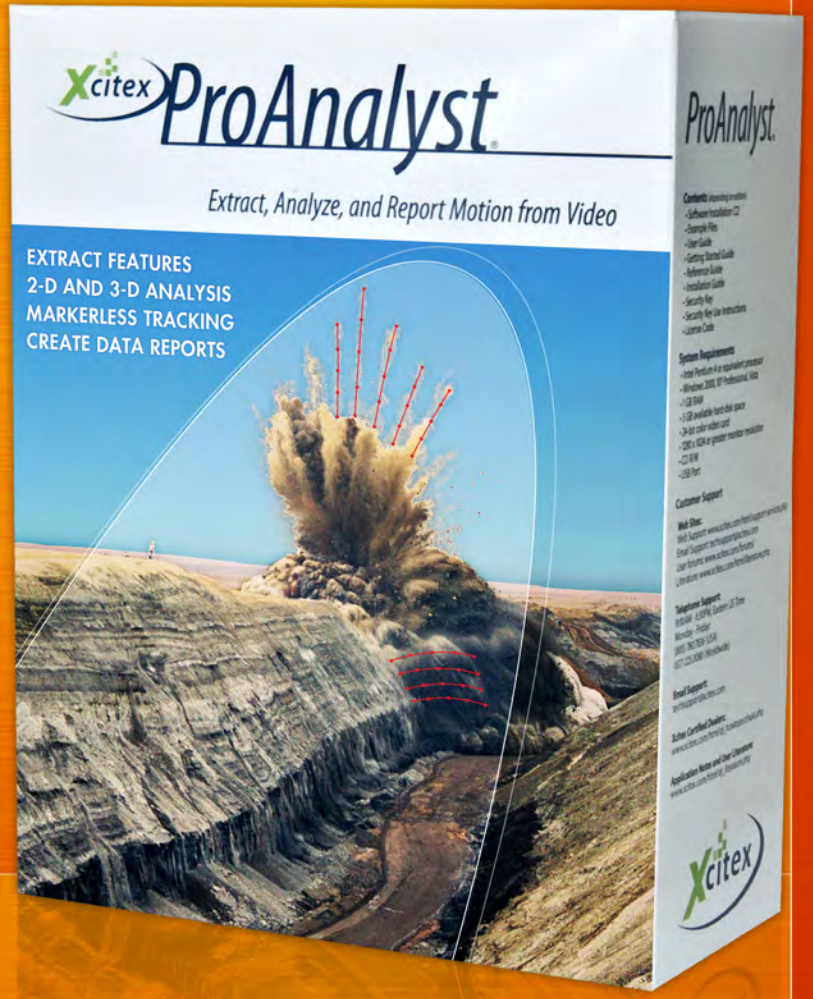
VIDEO ANALYSIS: 1-D, 2-D AND 3-D FEATURE TRACKING.

GRAPHING: 2-AXIS, 3-AXIS and 3-D.

POINT TRACKING

VELOCITY VS TIME GRAPH






- Import and export multiple file types.
- State of the art image processing tools.
- Track blast movement without having to use special markers.
- Auto-track and/or manually track blast movement.
- Several editions to suit a range of requirements and budgets.
- ProAnalyst® updates are free to MREL's customers.
- MREL's 1 year Comprehensive Parts & Labour Warranty.

# ProAnalyst®

**ProAnalyst® is the world's premier software package for automatically measuring moving objects with video.**

MREL provides all Editions of ProAnalyst® to the Blasting and Explosives Industries worldwide and includes ProAnalyst® TrackOne Edition with each BlastCam™ High Speed Camera and Blaster's Ranger™ High Speed Camera sold.

ProAnalyst® assists blasters to measure the effects of changes in the blast design such as blasthole diameter, timing, burden/spacing, and stemming on the time of onset, and the velocity and trajectory of rock movement at the top and face of the blast.

ProAnalyst® allows blasters to import virtually any digital video and quickly measure and track time, position, distance, velocity, acceleration and other rock characteristics within that video. Analysis results can be instantly graphed and reviewed, compared against external data, and can even be exported to PowerPoint® presentations, printer-friendly reports, and HTML web pages to bring your blast design optimization project to completion.

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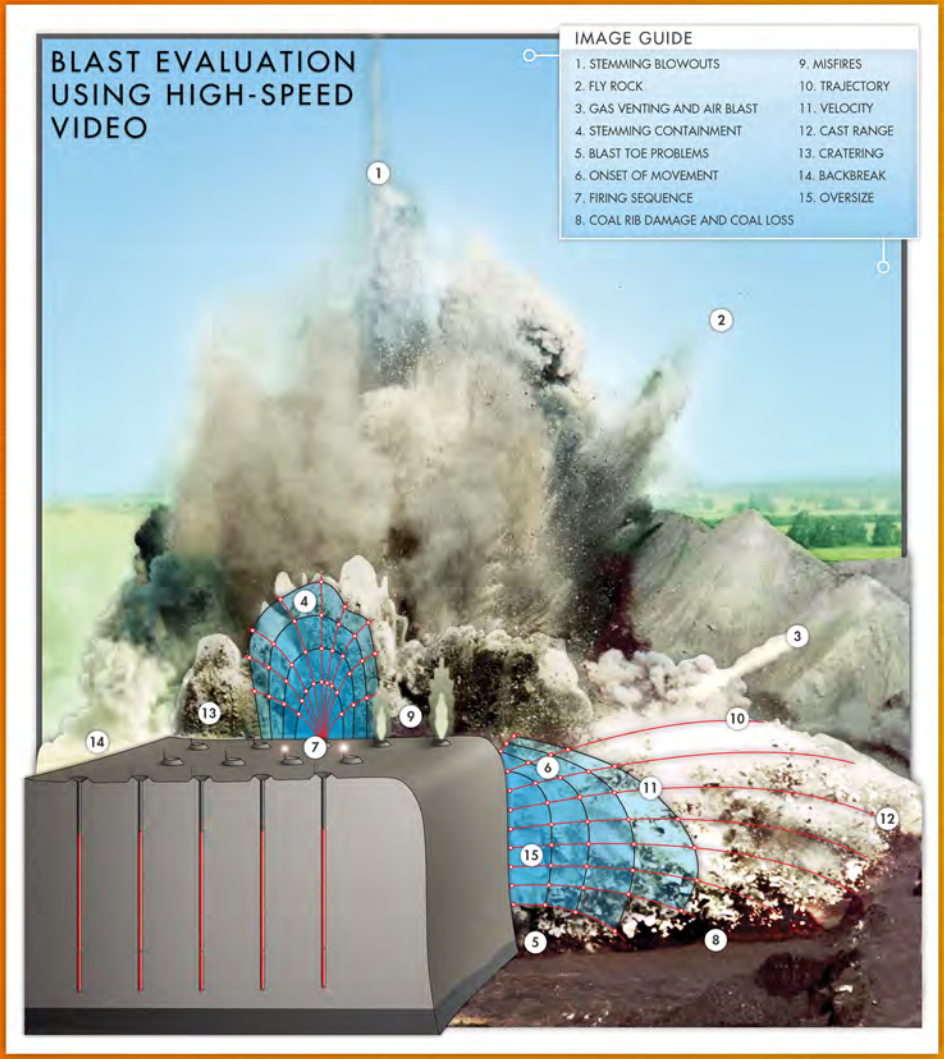
MREL
GROUP OF COMPANIES




## PRODUCTS:

**ProAnalyst® TrackOne:** Included with each MREL BlastCam™ High Speed Camera and Blaster's Ranger™ High Speed Camera sold. Also available without camera, this software includes auto-tracking of one feature and/or manually tracking of up to 32 features. Quickly export to Excel® or MATLAB® for further analysis and graphing.

**ProAnalyst® Professional Edition:** Includes all the analysis features and engines for auto-tracking objects in 1-D and 2-D, data reduction and report generation.

**ProAnalyst® 3-D Professional Edition:** Includes all the features of the Professional Edition, plus the 3-D Manager. Analyze events captured by multiple cameras to reconstruct and display motion in 3-D with accuracy.

**ProAnalyst® Image Stabilization:** A recommended add-on toolkit for the ProAnalyst® Professional Editions which removes unwanted jitter and vibration from a video.

| | TrackOne Edition | Professional Edition | 3-D Professional Edition |
|---|---|---|---|
| **FILE MANAGEMENT** | | | |
| AVI, AVI 2.0, MPG, MOV, CIN movie file compatibility | ● | ● | ● |
| BMP, JPG, TIFF image sequence compatibility | ● | ● | ● |
| Project-based file management | ● | ● | ● |
| Video Explorer | | ● | ● |
| Workspace View file browser | | ● | ● |
| Pack/Unpack Projects | | ● | ● |
| **IMAGE CALIBRATION & PROCESSING** | | | |
| 3-D Manager | | | ● |
| Image processing | ● | ● | ● |
| Image filtering | | ● | ● |
| Video Timeline | ● | ● | ● |
| Layered display and editing | ● | ● | ● |
| 2-D scene calibration | ● | ● | ● |
| Perspective and multi-plane scene calibration | | ● | ● |
| 3-D scene calibration | | | ● |
| Lens distortion correction | | ● | ● |
| **VIDEO ANALYSIS** | | | |
| 1-D feature tracking | | ● | ● |
| 2-D feature tracking | ● | ● | ● |
| 3-D feature tracking with epipolar line projection | | | ● |
| Number of Auto-Track features | 1 | Unlimited | Unlimited |
| Number of Manual Track Points | 32 | Unlimited | Unlimited |
| Real-time annotations of distance and angle between features | | ● | ● |
| Image Stabilization Toolkit | | Optional | Optional |
| **GRAPHING & COMPUTATION** | | | |
| Graphing within ProAnalyst | | ● | ● |
| One-click FFT | | ● | ● |
| 2-axis graphing | | ● | ● |
| 3-axis graphing to compare three features | | ● | ● |
| 3-D graphing and modeling in x,y,z space | | ● | ● |
| Data filtering | | ● | ● |
| **NOTE & REPORTS** | | | |
| External data import | | ● | ● |
| Tracking data export to DIAdem, Excel®, MATLAB® | ● | ● | ● |
| Video frame, data point, and global notes | | ● | ● |
| Image annotation | | ● | ● |
| HTML, PowerPoint, and print-ready report generator | | ● | ● |

## FREE SOFTWARE TRIAL

Contact MREL to apply for your free 21-day trial of ProAnalyst® Software.

MREL is committed to product innovation; accordingly product may undergo specification improvements without notice.
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