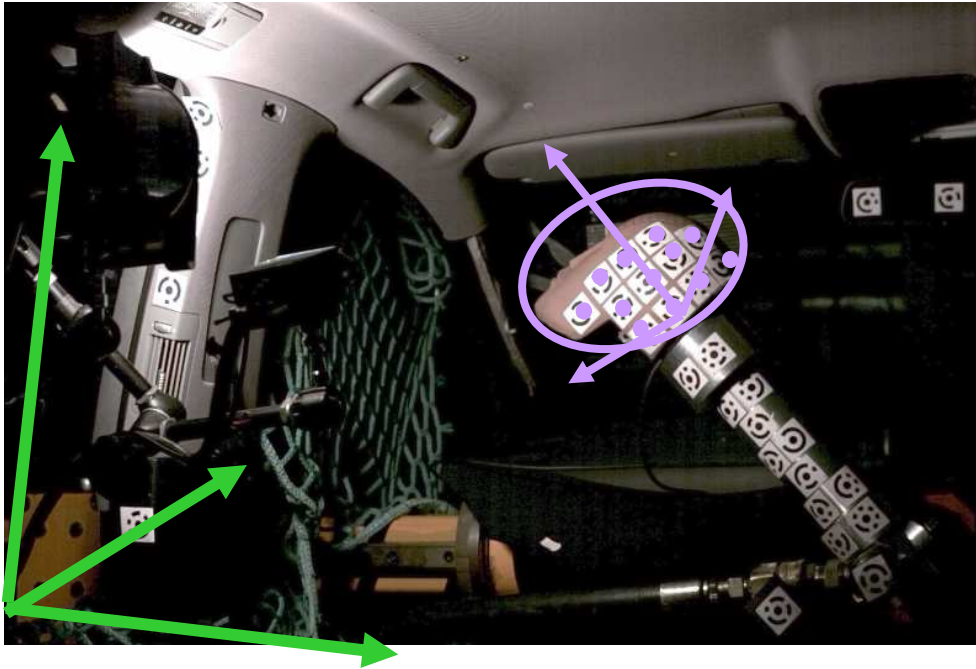# FalCon eXtra Mov6D

The 3D Image Analysis by One Camera

Main features:

The image analysis software **Mov6D** offers you the possibility to analyze 6D motion of rigid objects by the means of one camera. The 6D-parameters contain position (x, y, z) and orientation (ω, φ, κ) in space.

A so-called 6D-object consists of at least four markers, whose geometry to each other mustn't vary (= "rigid" by definition). You just have to enter the pre-measured control point data into the program, which determine the geometric model.

Using the 2D module MovXact you track the markers of the object in one monocular view. Photogrammetric methods enable you to calculate 6D trajectories, which are relative to a start value or to a superordinate coordinate system.

- ASCII interface for 6D-objects with 3D-control points
- 6D-calibration and output of x-y-z displacements and ω-φ-κ angles as time diagrams (with a-v differentiation etc. see MovXact)
  and as in Mov3D:
- Type of marker CODE (= coded ring marker, by AICON)
- Calibration of camera and lens with powerful distortion correction
- Calculation of 3D coordinates of reference markers of a 6D object using one view/camera (= mono mode) only.
- Analysis according to regulation EN 1317-2

6D From Tip to Toe !

Applications:

- FMH test stand
- Pedestrian impact tests
- Intrusion of heavy goods vehicles into road restraint systems (regulation EN 1317.-2)
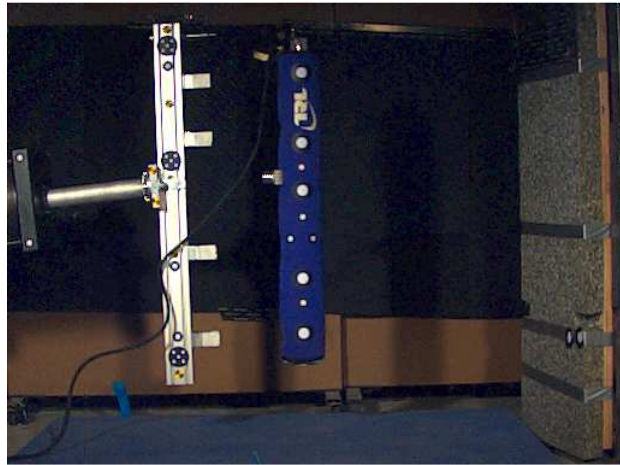
Data necessary for successful 6D analysis:

control point data
of an 6D-object

ControlPoints.apt

Tracking data: image points of a 6D-object
image sequence

View-A.avi

Calibration measurements
image sequence of test target +
camera - lens - data +
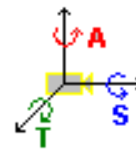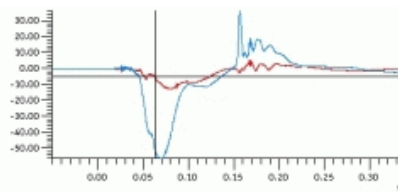control point data in ASCII file

ISO-Target-A.avi   ISO-Target.apt

► 6D measurements
Control point data +
tracking data of points +
calibration measurements

Technical Framework:

- Program system for computer platforms under WINDOWS 2003 / 2008 / 2012 / WIN 7 / 8 / 10
- User interface compliant to MS-Windows.
- Upgrade to FalCon MovXact Pro.
- **Technical specifications are subject to change.**